a W. R. C. Smith publication

Textile Industries

Formerly "COTTON"

JULY, 1955

Executive Section 51-66
New Equipment Section 145-160

Employee Recreation Pays! . . 67

Adjust for the Fiber 70

11 Tips for Resin Finishing . . . 74

Napping Essentials 77

Check-Up for Filament Weaving 80

How to Stabilize Wool Blends 82

"Air Conditioned" Yarn Mill . 85

Weaving Defects, Part 3 88

Merchandising, Article 7 90

Jacquard Designing Made Easy 94

Carding-Spinning Forum 107

Knitting 120-127

Complete contents on page 3

JACOBS
"VERYBEST"
RUBBERWELD
LUG STRAPS

Made entirely of rubberized cotton fabric
More uniform than any other lug strap!

Samples available

- UNIFORMITY — Provides unvarying pick action
- HIGH QUALITY ARMY DUCK — Construction gives extra strength
- NO PERMANENT STRETCH — Resists oils — not affected by humidity
- EXTRA-DURABLE — Plug or heel reduces adjustments
- MOLDED AS ONE PIECE — Entirely, including plug
- NO RIVETS — or parts to work loose

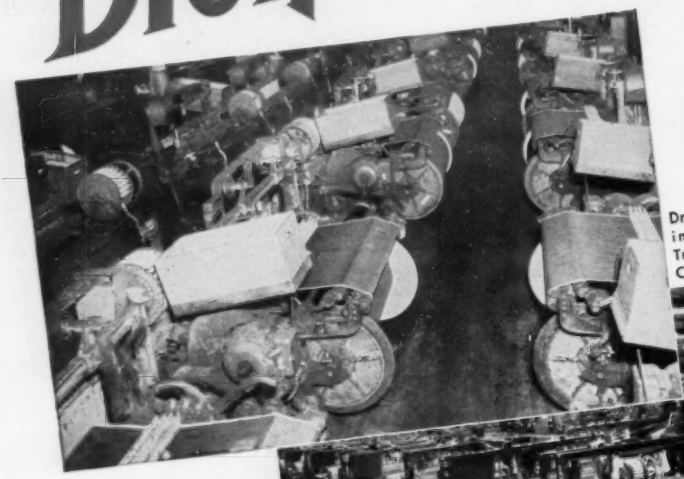
THE BULLARD CLARK COMPANY
JACOBS
SOUTHERN DIVISION Charlotte, N. C.
NORTHERN DIVISION Danielson, Conn.

University Microfilms
313 No First St
Ann Arbor Mich 4

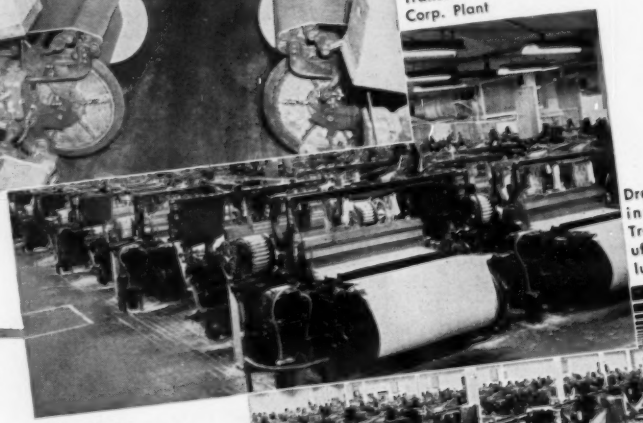
Diehl POWER TRANSMITTER

is assuring maximum weaving efficiency in leading mills

Thousands of Diehl Power Transmitters are operating DRAPER LOOMS in leading textile mills. Many have been in continuous operation for five years.



Draper X2 looms operating with Diehl Power Transmitters in Cone Mills Corp. Plant



Draper XD looms operating with Diehl Power Transmitters at Bibb Manufacturing Company, Columbus, Georgia.

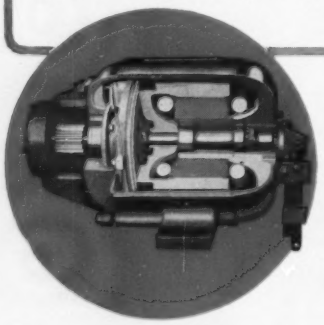
Draper XD looms operating with Diehl Power Transmitters at the Lyons Plant, Synthetic Division, M. Lowenstein and Sons.

MILL MEN ARE ENTHUSIASTIC ABOUT THESE FEATURES

- "Stored energy" for smooth, rapid starts and positive picking.
- Precision braking.
- Minimum fluctuations of speed and motor current.
- Lower power consumption.
- Lower motor heat losses.
- Eliminates current regeneration.
- Simplicity and ease of maintenance.

. . . all of which adds up to increased mill production, improved quality of cloth, lowered operating costs and long, trouble-free service.

We will welcome an opportunity to tell you—without obligation—how the Diehl Power Transmitter can bring these benefits to you.



This cutaway view illustrates the inverted construction of the power transmitter and shows the rotor which revolves around the outside of the stator on a hollow shaft—providing the essential inertia without the disadvantages of a separate fly wheel. Note the pinion driving shaft with attached clutch-plate which is shifted axially by simple lever at front end of motor, regulating clutch engagement pressure and providing controlled driving and braking action.

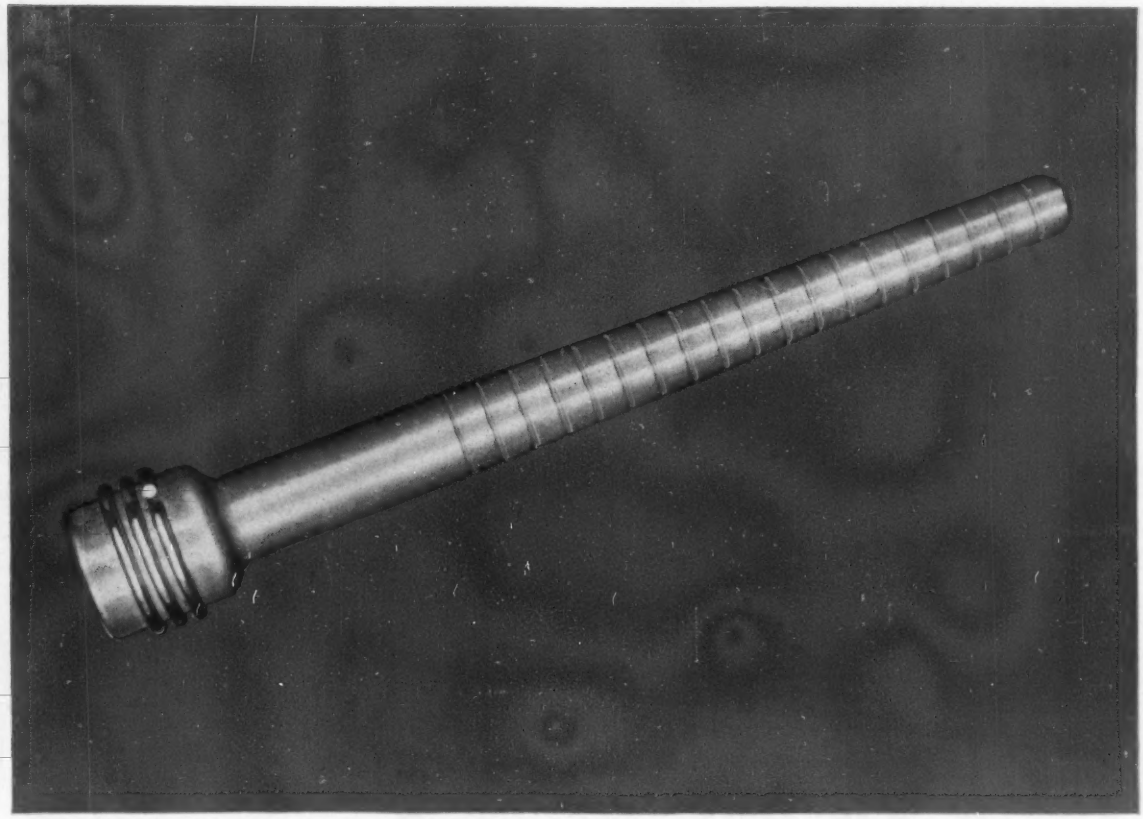
Visit us at Booth No. 429 at the
THE PRODUCTION ENGINEERING SHOW
(the Automation Exposition)
Navy Pier, Chicago
September 6-16, 1955

DIEHL MANUFACTURING COMPANY

Electrical Division of THE SINGER MANUFACTURING COMPANY

Finderne Plant, SOMERVILLE, NEW JERSEY

ATLANTA • BALTIMORE • BOSTON • CHICAGO • DETROIT • NEW YORK • PHILADELPHIA • WORCESTER



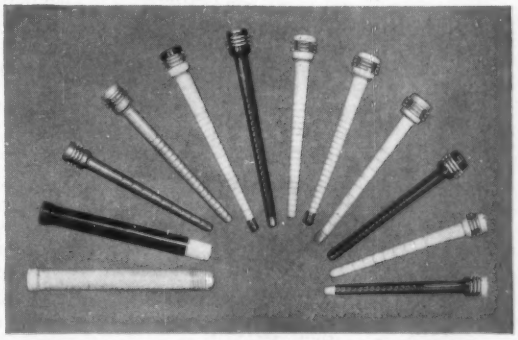
TWO-WAY REDUCTION WITH DRAPER BOBBINS

Draper custom-built bobbins help you reduce costs in both your *spinning* and *weave rooms*.

Made from the finest raw materials . . . under modern manufacturing techniques . . . Draper Bobbins are unsurpassed for quality and uniformity.

Exacting manufacturing tolerances on all dimensions, both *inside* and *out*, reduce costly down-time in spinning and weaving.

For greater profits, increased production and efficiency, order Draper Bobbins . . . quality bobbins at low cost.

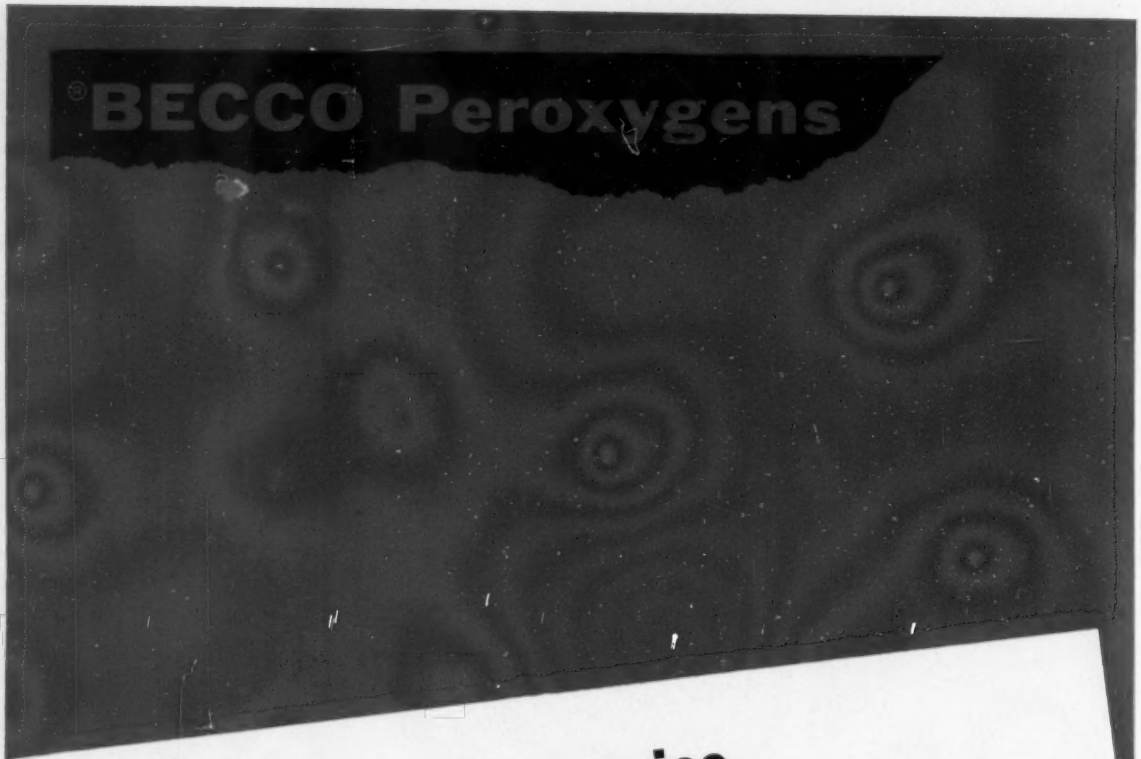


There is a quality Draper bobbin to meet all your requirements.

DRAPER CORPORATION

HOPEDALE, MASS.

ATLANTA, GA.
GREENSBORO, N. C.
SPARTANBURG, S. C.



What is BECCO service to the Textile Industry?

It is Peroxygen Chemicals...

Becco hydrogen peroxide for bleaching cotton, wool, animal fibers (including cashmere), synthetics and blends, and for dyestuff oxidation; Becco peracetic acid for bleaching many synthetics and blends; Becco ammonium persulfate for oxidation of sulfur dyes; sodium perborate for dye development.

It is Processes...

Continuous bleaching, continuous knit goods bleaching, kier bleaching, package machine bleaching, Becco cold bleaching (patented), processes for bleaching with peracetic acid ... these and other processes owe much of their development to Becco research.

It is Delivery...

Becco chemicals are manufactured, stored and shipped to reach Becco customers in perfect condition by tank car, truck or in drums from numerous filling stations and warehouses so located as to assure prompt delivery.

It is Technical Service...

Becco has modern laboratories, a large research staff, chemists for research or consultation in your plant. Representatives throughout the country are trained technical men.

It is Technical Literature...

Among interesting Becco bulletins available on request are:

2. Hydrogen Peroxide
4. Peracetic Acid 40%
29. Hydrogen Peroxide Dry-In Process for Bleaching Wool
30. Hydrogen Peroxide in the Manufacture of Viscose
35. Modification of Wool with Peroxygen Compounds
38. Oxidation of Vat Dyes on Cotton and Synthetics with Hydrogen Peroxide
52. Bleaching with Some Peroxygen Chemicals
53. Fluorescent Agents in Hydrogen Peroxide Bleaching of Knit Goods
60. Successful Bleaching of Types 670 and 200 Nylon
61. Knit Goods Bleaching Range

Write for Becco Technical Bulletins by number, or for Becco's Bulletin List.

BECCO CHEMICAL DIVISION

FOOD MACHINERY AND CHEMICAL CORPORATION

STATION B, BUFFALO 7, N.Y.
BUFFALO • BOSTON • CHARLOTTE • CHICAGO
• NEW YORK • PHILADELPHIA • VANCOUVER, WASH.

ASC NBP BPA

Textile Industries

Formerly "COTTON"

Vol. 119, No. 7
July 1955

CONTENTS

Copyright 1955 by W. R. C. Smith Publishing Co.

Additional Items

Management

Walen Concerned Over Wool Mill Liquidations 51
Hoover Commission on Textile Products 51
AATCC Checks on A-Bomb Effects 57
Sheets Largest Cotton User in '54 69
Study Shows Gains for Women's Wear Woolens in 1954 115
World Per Capita Fiber Consumption Figures 127

Cotton

Reader Explains "Antiquated" Slashing Practices in India 130
Easy Way to Oil Overhead Cleaners 133
How to Get 3 Picks Per Inch on XD Looms 139
"Standardize Shirley Analyzer Tests" Swedish Cotton Mills Ask 139

Wool

Continuous Dyeing of Wool Rawstock in a Scouring Train 101
Stacked This Way, Worsted Roving Bobbins Can Be Pushed Anywhere 140

Synthetics

How to Distinguish Orlon from Acrilan 59
Double Tiered Creel Saves Space 115
Deep-Dye Nylon 147

Wet Process

Bleaching Cotton — Nylon Blends? 59
You Can't Vat Dye Acrilan Like Cellulosic Fibers! 105
Ultrasonic Vibrator for Wet Processing 145

Knitting

Knit Goods Shrinkproofing Dependent on After-Curing Wash? 87
Boardless Dryer Yields Stockings with Softer Hand 153
Machine Sets, Dyes, and Finishes Hosiery Automatically 157

DEPARTMENTS

Shorts and Remnants 4
Personal Notes About Men You Know 20
What the Textile Mills Are Doing 48
News in Brief 51
An Executive Views the News in Textiles 61
Future Events 63
How Other Men Manage 129
New Equipment and Materials 145
Helpful Booklets Free 163
Suppliers' News 181

Features

		SPIN-WEAVE	WOOL	SYNTHETICS	WET PROCESS	KNITTING
Yes! Employee Recreation Pays	67	•	•	•	•	•
You Must Adjust for the Fiber (Spinning Synthetics)	70		•	•		
11 Ways to Better Resin Finishing	74				•	
Don't Overlook the Essentials in Napping	77	•	•			•
Quality Check-Up for a Filament Weaving Plant	80			•		
How to Get Dimensional Stability for Wool Blends	82		•	•	•	
A. M. Smyre's No. 1 Plant Is "Air Conditioned"	85	•				
Loom Fixing Tips and Causes of Weaving Defects, Part 3	88	•				
Merchandising, Article 7 (Sales Development As a Function of Merchandising)	90	•	•	•	•	•
Take the Hard Work Out of Jacquard Designing	94	•	•	•		
Detailed Grading System Assures Narrow Sort Variation in Wool Pulling	102		•			
Georgia Carding — Spinning Forum	107	•				
The Guaranteed Annual Raise	117	•	•	•	•	•
Knitting	120-127					•
Try this 10-Point Program to Control F-F Hosiery Length	120					•
How Triangle Hosiery Co. Makes Cotton-Nylon Stretch Socks	124					•

General and Technical

New Finish Puts Cottons in No-Iron Wash-and-Wear Class	53				•	
How The Kendall Co. Plans and Controls Its Operations	72	•	•	•	•	•
Lighting Arrangement Cuts Shadows, Improves Weaving	73	•	•	•		
Research on Wool Waste Aids Attack on Stream Pollution	79		•			
Considering Using Two-Way Radios in Your Mill?	84	•	•	•	•	•
First Award Winners in Packaging Competition	92	•	•	•	•	•
N. Y. Cotton Exchange Announces Proposed Contract Changes	93	•				
Pointers on Carding 8 and 15 Denier Rayon	123			•		
Simplify Fabric Analysis with this Standard Form	129	•	•	•		
How to Ship Light Fabrics without Damage	133	•	•	•		
Make Floor Brushes Last Longer	140	•	•	•	•	•

EDITORIAL AND EXECUTIVE OFFICES: 806 Peachtree St., N. E., Atlanta 5, Georgia

John C. Fonville ..... **Editor**

Associates

J. Frank Guest—George H. Dockray—D. Williams

Milton C. May *(P. O. Box 441, Kings Mountain, N. C.)*

Leon E. Seidel *(22 East 93rd St., New York 28)*

J. A. Moody ..... *Production Manager*

John C. Cook ..... **Business Manager**

Walter M. Mitchell, Jr. ..... *Advertising Manager*

Business Representatives in U. S. A.

BOSTON—Arthur C. Shaw, *27 Southgate Rd., Wellesley 81, Mass. (Phone: Wellesley 5-3648).*

NEW YORK—William K. Hoffman, *58 Euclid Ave., Maplewood, N. J. (Phone: South Orange 2-2484).*

PHILADELPHIA—George Isherwood, *590 Rutherford Dr., Springfield, Pa. (Kingswood 30760).*

CHICAGO — A. C. Petersen, *333 North Michigan Ave., Chicago 1, Ill. (Phone: Central 6-6964).*

CLEVELAND—A. E. C. Smith, *P. O. Box 3054, Cleveland 17, Ohio (Phone: Cherry 1-7352).*

PITTSBURGH-BUFFALO AREA—J. D. Parsons, *39 Atlantic Ave., Cohasset, Mass. (Phone 4-0712).*

CHARLOTTE—W. Cliff Rutland, *Box 102, Gastonia, N. C. (Phone 7995).*

LOS ANGELES—L. B. Chappell, *810 So. Robertson Blvd., Los Angeles 35, Calif. (Crestview 4-5151).*

TEXTILE INDUSTRIES is published monthly at 116 E. Crawford St., Dalton, Ga., by W. R. C. Smith Publishing Company, Dalton and Atlanta, Ga., U. S. A. W. J. Rooke, chairman of the board; R. P. Smith, president. Executive and Editorial Offices: 806 Peachtree St., N. E., Atlanta 5, Ga.
Subscription Rates: United States and Possessions, $2.00 for one year; Canada, South America, Central America, $2.00 per year; Foreign Countries, $5.00 per year.
Entered as second-class matter at the post office, Dalton, Georgia, under the Act of March 3, 1879.

Big ones or little ones, short ones or long ones . . . printed or colored, round or shaped. Whatever your special requirements Textile Paper Products is your most reliable and economical source. Call, telephone or write.

Manufacturers of better

Convolute and Spiral Wound Cloth Tubes

Carpet and Rug Cores

Yarn Tubes

Cloth Winding and Bailing Boards

Beaming and Carlining Paper

TEXTILE PAPER PRODUCTS, INC.

Cedartown, Georgia ● Crossett, Arkansas

Now TWO plants to serve you. Prompt delivery by our own fleet throughout the South and Southwest!

Shorts and Remnants

► And what is so rare as a day in July—especially the 4th day in July —Nine score "years ago our forefathers brought forth on this continent a new nation . . . . " etc.

► We have it on good authority that Davy Crockett was *not* among those forefathers but we doubt that we can prove it—especially to a youngster who is after us for Davy Crockett towels, bed sheets, and pillow cases. Boy! Did our textile boys go into that one? What's the matter with the breakfast food boys —no Crockett toasted flakes yet, or have we missed it. Maybe it has been established that he ate "Wheaties."

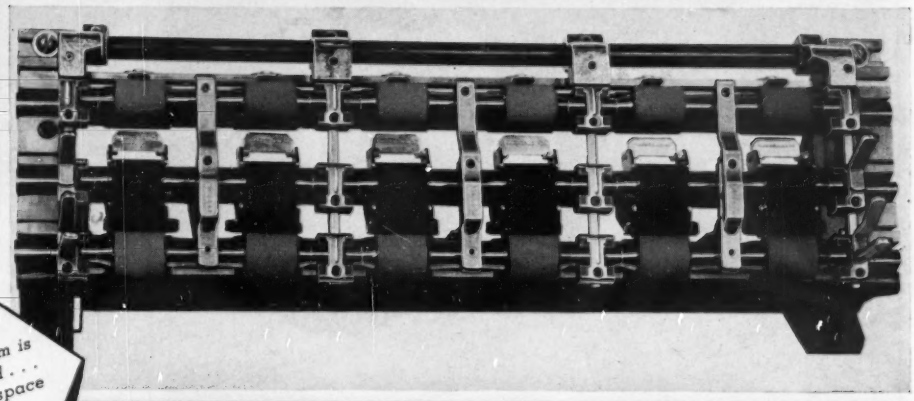
► Anyway another Fourth of July rolls around and we haul out the Red, White, and Blue and give thanks

for Peace, Progress, and Prosperity U.S.A. style in 1955.

► At Griffin, Ga., recently a good old New England firm, Stowe-Woodward, opened a new plant for making rolls for textile finishing, complete with barbecue and speeches. Some New England visitors smiled at the flag pole on which the Confederate

MODERNIZE SPINNING

. . . THE SIMPLEST, MOST EFFECTIVE (AND LEAST EXPENSIVE) WAY



Roberts Drafting System is simple and uncluttered . . . with more cleaning space between elements.

ROBERTS HIGH DRAFT

Simplest All variables eliminated. No bearing gadgets, springs, pivots, or other elements to vary from spindle to spindle or month to month.

Most Effective Concentrated tests prove higher break factors, lower ends down, better yarn evenness and greater consistency of performance.

Least Expensive The simple combination of gadget-free elements provide a lower first cost and the lowest maintenance cost.

★ ROBERTS HIGH DRAFT DRAFTING SYSTEM

- a true double apron system
- a simple, uncluttered drafting system with all variable elements omitted
- the narrowest possible cradles, aprons and cots consistent with the gauge
- positively set and maintained top roll settings
- proper and unchanging weight distribution
- elimination or reduction of top roll and bottom roll lubrication
- strengthening of the draft gearing by use of hardened gears and studs plus increase in head-end roll neck diameters.

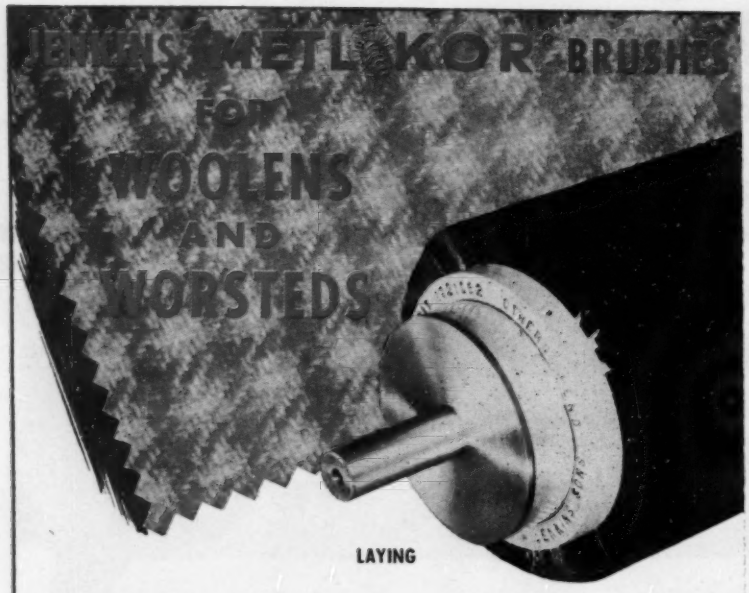
★ ROBERTS HIGH DRAFT SPINNING MODERNIZATIONS

- Partial or complete Drafting System Changeovers
- Increased Draft Constant and Hardened Draft Gearing
- Creels for Larger Packages
- Ball Bearing Cylinders and Tape Tension Pulleys
- Increased Traverse on Bobbin
- Roller Bearing Spindles
- Rings and Ring Holders
- Inspection and Replacement of all other Parts

In addition to supplying all or any part of the above modernization material, we can provide a complete "turnkey job" including all installation and erection. The experience gained in the installation of more than 1¾ million spindles of Roberts High Draft is available to you on the smallest Changeover or the most complete Modernization.

ROBERTS COMPANY

Sanford, North Carolina, U. S. A.



LAYING

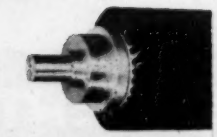
One of the most important factors in achieving top quality and peak performance in the manufacture of woolens and worsteds is the use of the right brush, correctly designed and constructed. The Jenkins' METLKOR brush for the woolen industry is just such a brush, developed out of three-quarters of a century of experience.

Specifically designed for processing these fabrics, the Jenkins' METLKOR brush will not sag, split, crack or get out of alignment. True-balanced and uniformly tufted to give uniform production, this brush—with any desired bristle on permanent metal core—will outlast other brushes many times while surpassing them in efficiency.

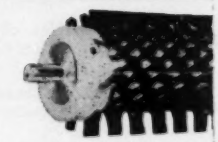
Leading textile machinery manufacturers for years have been using efficient Jenkins' METLKOR BRUSHES as an integral part of their equipment.

If you have any standard or special brush problems, write, wire or phone today, without obligation.

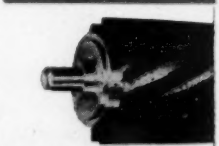
LIFEWOOD® *for wood core brushes and lags.*



RAISING



FLOCK



CARBONIZER

OTHER METLKOR BRUSHES FOR WOOLENS:

- BRUSHING MACHINE
- TEASELING
- TEASEL CLEANING
- CARDING
- WET CLOTH BRUSHING
- STEAMING
- PRESSING MACHINES
- SINGEING

M. W. JENKINS' SONS, INC.

Over Three-Quarters Century of Pioneering Brushes for Industry.

Cedar Grove, Essex County, New Jersey

TELEPHONE Verona 6-5337

Shorts and Remnants

flag was prominently displayed just beneath the United States flag. Some of the southern visitors asked what the flag was at the top.

► While we are talking about North and South, here's one for you. At the recent Knitting Arts Exhibition, S & R remarked to a couple of visitors from Millville, *New Jersey*, that even the southern mills seemed to be out in full force for this Show. "Yes, we are," the Millville boys admitted. Seems as though they claim that Mason and Dixon's line runs 4½ miles *north* of Millville. So those English astronomers Charles Mason and Jeremiah Dixon who drew up the dividing line (roughly the southern border of Pennsylvania extended) must have been star gazing, for it's true. We looked it up. From now on Millville Mfg. Co., Millville Hosiery Co., Cumberland Textile, and Smith Rug Works are now properly down on our books as *southern* mills. And our New York advertising rep, Bill Hoffman, born and bred in Millville, may wear his Confederate tie and join the southern society.

► While we are on knitting, during the KAE old S & R voiced one of his two complaints on the knitting trade—the apparent inability of mills to make a truly light weight cotton argyle. A few days after the Show, four pairs of truly light weight—Continental, I believe they call it—argyles arrived with a nice card from **Paul W. Baker,** Holeproof Hosiery Co., Marietta, Ga. Thank you, Paul. (The other complaint concerns sheer nylons for the Mrs. that won't run the *first* time out.)

► Before we get away from the southern angle, the deep South boys seem to have run away with the honors in the prizes awarded by Dexter Chemical Corp. for exceptional sales work. Shown below are left, **Joseph B. Evans,** V. P., giving a big check to **E. P. Henley,** Greensboro, N. C., rep.; and right, **Sidney M. Edelstein,** Pres., awarding one to **Bill Griffin** of Atlanta:

Experimental lab with the right atmosphere

The A. French Textile School at the Georgia Institute of Technology in Atlanta, founded in 1899 to train textile engineers and administrators, is recognized today as one of the nation's foremost experimental schools.

Here, the subject of air conditioning in textile manufacture is truly "academic". For here, new manufacturing techniques are tried out and old ones re-tested. To provide the exact atmosphere needed for student experiments, an Amco Central Station Air Conditioning System is in operation. This complete AMCO system is invaluable. It mixes fresh and recirculated air, in proper proportions; delivers it to the work area, neither too "wet" nor too "dry" . . . but always at the proper degree of moisture and temperature for work in progress.

Over the years, the name AMCO has stood for leadership and outstanding quality in the manufacture of air conditioning systems. There is an Amco System to fit every need. An Amco engineer will gladly discuss the merits of the various systems available to you. Or, write for free copy of "Air Conditioning for the Textile Industry".

AMCO

AIR CONDITIONING SYSTEMS since 1888

AMERICAN MOISTENING COMPANY, PROVIDENCE, R. I. • ATLANTA • BOSTON • CAMDEN • CHARLOTTE • AFFILIATED WITH GRINNELL COMPANY, INC.

REPUTATION

Is Mighty Important When You're Getting Up That Saturday Foursome

When you're arranging that Saturday foursome, it's important to see that you get the best golfer on your side!

It's also important to choose the electrical contractor with the best reputation to handle electrical projects in your mill. J. M. Clayton Co. has the reputation and the know-how . . . you'll hear the name mentioned wherever quality electrical contracting is being discussed.

WE'VE SERVED THE TEXTILE FIELD FOR FORTY-NINE YEARS

J. M. CLAYTON CO.

CONTRACTING ELECTRICAL ENGINEERS

ATLANTA, GEORGIA

Shorts and Remnants

► Speaking of the South, we have an interesting item from **Vasser Woolley,** Pres., Seydel-Woolley & Co., Atlanta, on the sixth major expansion of this textile chemical firm. Apparently this company had its beginning in Atlanta around 1904 but the Seydel Bros., founders, decided being in the South was a *handicap* and they moved to Jersey City. 'Taint no handicap today. P.S. The late Paul Seydel returned to Atlanta in 1923.

► Before we get away from that Knitting Arts Show in good old Atlantic City by the sea, one of our good editors turned in the following as "overheard at the Hosiery Industry Conference (comments after viewing a contest to see which girl could change stockings the fastest): 'We should have a contest to see which woman can change her mind the quickest.' 'We should have a contest to see which hosiery buyer takes the shortest time to make up his mind—instead of using a stop watch, we could use a calendar.' Popular mill owner's comment: 'I buy everything wholesale, even if it costs more.' "

► More on Knitting. **Bertrom Sternlieb,** Gen. Mgr., Finecraft Knitting Mills, Inc., New York City, writes that they are working on "a bit of research dealing with the development and growth of the Knit Goods Industry in the U.S." That's a big subject, and we covered a lot of it in "Fifty Years of Textile Progress," July '48, but maybe we had better leave that to the NAHM, Underwear Institute, etc.

► Also, if you know any good Komet Links and Links fixers who want to move to Independence, La., **E. T. McLellen,** Pres. Alden Mills, New Orleans, La., writes that he could use some help.

► S & R is not taking over the Help Wanted ads, but we surely noticed the heavy mail coming in for a mill that advertised in a recent issue of TI for a $20,000 manager. If we didn't have so much fun writing S & R, we'd answer that one.

► Realizing the tremendous number of TI readers who are scientific mountain climbers, W. C. Dillon & Co., Inc., Van Nuys, Calif., sent us a news item on their Dillon Dynamometer which measures tensile or

Here's the Beginning of New Opportunity

with fabric treatments based on PLIOLITE LATICES

This is the home of PLIOLITE LATICES—a large and growing family of styrene-butadiene copolymer emulsions. These aqueous dispersions are helping a number of finishers to profitable backings, sizes, saturants, dye systems and adhesives for fabrics, rugs and other textile products.

PLIOLITE LATICES range from high-styrene content, resinous dispersions to low-styrene content, elastomeric dispersions. They can be used alone or with each other, with other types of latices, or as modifiers for starch and other film-forming materials. Their multiplicity, compatibility and many desirable properties can give you a new opportunity for fabric treatment.

Goodyear has three big lines of latices for the textile industry: Styrene-butadiene copolymers, PLIOLITE LATEX—nitrile copolymers, CHEMIGUM LATEX—vinyl copolymers, PLIOVIC LATEX. Why not learn more about them, today? Samples and technical help are yours by writing:

Goodyear, Chemical Division, Akron 16, Ohio

CHEMICAL GOODYEAR DIVISION

Chemigum, Pliobond, Plioflex, Pliolite, Plio-Tuf, Pliovic—T. M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

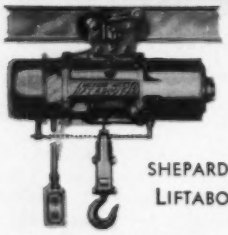
The Finest Chemicals for Industry—CHEMIGUM • PLIOBOND • PLIOFLEX • PLIOLITE • PLIO-TUF • PLIOVIC • WING-CHEMICALS

SHEPARD NILES

LIFTABOUT-JR.

PACE SETTER

on your production line



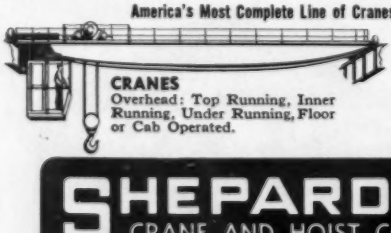
SHEPARD NILES LIFTABOUT-JR.

Send for Hoist Bulletin today . . . and request a Shepard Niles representative to call. He'll give you the facts on the complete Liftabout-Jr. line . . . help you select the hoist with the right capacity and controls for your lifting job.

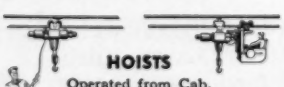
MEN AND MACHINES both produce faster when a Liftabout-Jr. carries the load! Manual lifting and lugging are banished . . . the worker puts the load right where it's wanted with ease. Ideal for "spot" handling or for speeding raw materials and products along your production line.

Shepard Niles Liftabout-Jr. is built to withstand years of use and abuse . . . it's the toughest medium-service hoist money can buy. Available with either rope or push button operation . . .parallel or cross-mounted with bolt, hook or trolley suspension in 250, 500, 1000 or 2000 lb. capacities.

America's Most Complete Line of Cranes and Hoists since 1903



CRANES
Overhead: Top Running, Inner Running, Under Running, Floor or Cab Operated.



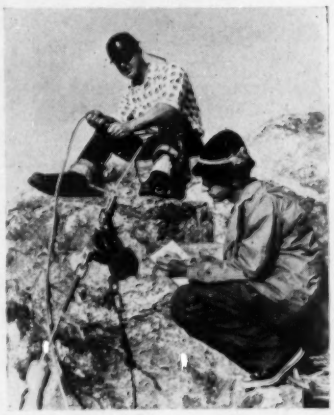
HOISTS
Operated from Cab, Floor or Pulpit.

SHEPARD NILES
CRANE AND HOIST CORPORATION

1968 Schuyler Ave., Montour Falls, N. Y.

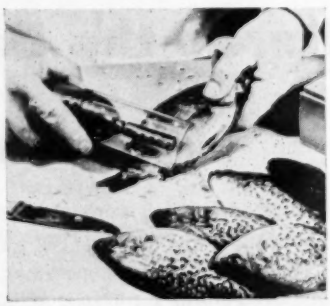
Shorts and Remnants

pulling forces on all types of mountain climbing gear (see photo below).



So before you start climbing, better be safe and send in your order today.

► For our more sedentary readers who, like S & R, get tired out just climbing stairs, there is an automatic, electric fish scaler which American



Homecraft Co., Chicago 41, Ill., sends as a good textile item to our new products editor.

► And, then, also if you are interested in flys other than the fishing type you might want a "Fly-Charmer." This handy little device looks like a small tree in which the limbs are dipped and coated with a substance supposedly irresistible to, and poisonous only to, said flies. S & R has one, a gift from **Dick Locke,** Dyestuffs Sales Mgr., Pittsburgh Coke & Chemical Co., Spartanburg, S. C. Maybe they can go in for fly charming when dyestuffs hit a slack period. We still like the exercise afforded by the old fashioned fly swatter.

► **J. P. Lynch,** Eclipse Machine Div. (Bendix), Elmira, N. Y., reads

When the Fashion Show "Ad Libs" a Quick Change

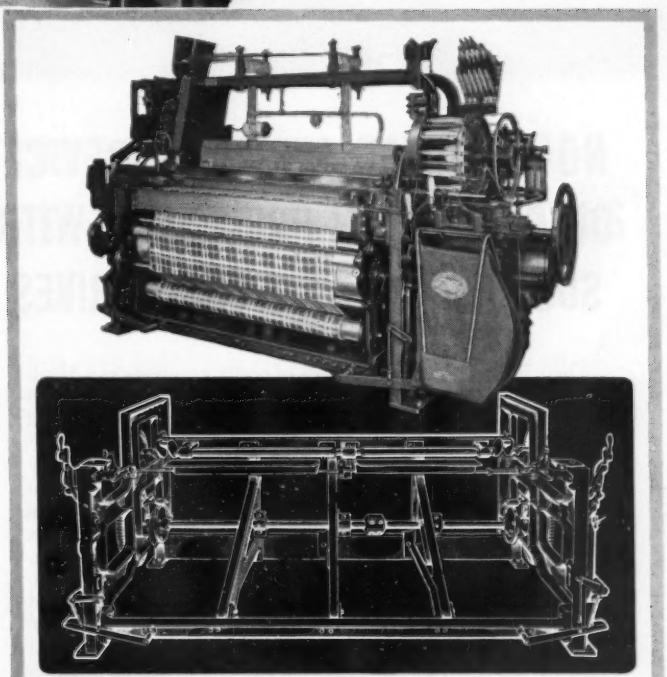
M-P means Mill-Protection!

If the prepared script is suddenly thrown away . . . and unfamiliar "new lines" thrown in . . . this could mean curtains for *unprotected* mills.

And these are the mills that do not have the *quick* convertibility of C&K's new **Multi-Purpose Looms** . . . mills whose weave rooms, for example, are limited by non-convertible types of looms.

On the other hand, modern weave rooms equipped with **M-P Looms** are always ready for a fashion-forced "quick change" . . . because of the unequalled range of letoffs, takeups, shedding mechanisms, feelers, and lay constructions . . . *all available on the same basic loom frame.*

So make sure that surprise switches in fabric constructions *can't* ring down the curtain on *your* mill's performance. See C&K today.



In black panel: This is the basic frame for the entire **M-P** line of looms. *Above the panel:* An **M-P** 20 harness (15/32" gauge) 4 x 1 box Automatic Dobby Loom, one of the many types which can be built on this same basic frame. Have your C&K representative show you *the full range* of **M-P** Convertibility.

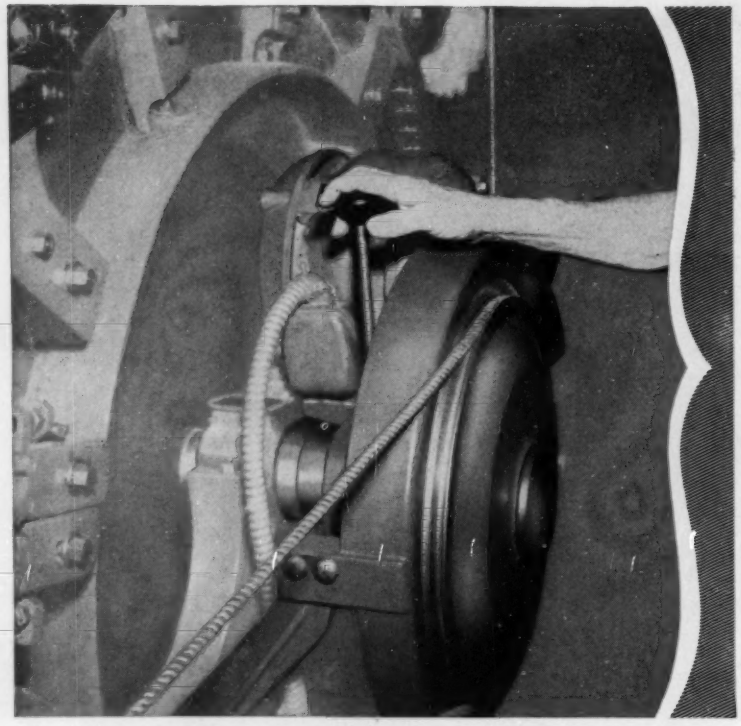
This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Fabrics . . . which are **WOVEN** Fabrics.

Crompton & Knowles LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

Charlotte, N. C. · Philadelphia, Pa. · Allentown, Pa.

Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.



NO SEPARATE STRIPPING DEVICE OR CHANGES IN PROCEDURE WITH SOUTHERN STATES CARD DRIVES

There is no need to run the risk of costly accidents as a result of changes in operating methods when you install individual card drives in your mill. Southern States has eliminated that problem.

An exclusive feature—a standard-diameter, grooved pulley, built on the main drive—permits stripping in the usual manner. In every case where Southern States Individual Card Drives are used, mills report that stripping is simpler, quicker and safer.

The Southern States Card Drive is priced low enough to fully justify the elimination of old-fashioned lineshafting and belting with their well-known headaches. It is a packaged unit, quickly and easily installed. Mounts directly to card frame. No complicated reduction unit or overhung load on cylinder shaft. Occupies about the same space as a flat-belt drive. Leaves the flats clear and eliminates the danger of springing arches or damage to flats as a result of vibration.

Every month increasing numbers of Southern States Individual Card Drives are going into service. Let our representative show you how they can be made profitable for your mill.

SOUTHERN STATES
EQUIPMENT CORP.
HAMPTON, GEORGIA

Shorts and Remnants

the fine print. He noted something on our title page which said "W. R. C. Publishing Co." and writes "where did Smith go?" That's a good question. Our editors say they ran it that way to see how long it would be before somebody noticed it. Took about six months.

► Speaking of names, Pennie, Edmonds, Morton, Barrows & Taylor, Counsellors At Law (N. Y.), write that they received the front cover of TI for May, but no magazine. Saves reading, but they want the whole magazine. And **Nicholas J. Holland**, Sr. Examiner, Methods and Procedures Unit, State of N. Y., Dept. of Labor, Business Administration, 80 Centre St. (N. Y.), wants 25 copies of "The Flammable Fabrics Act" (Oct. '53). If the National Cotton Council at Washington has an address label big enough for all that, maybe they will furnish copies.

► TI is practically on top of the heap in a recent brochure which American Pulley Co. put out for salesmen and distributors showing where their trade paper advertising is making over 5,000,000 calls during 1955. Let's see, if they use six pages in TI, that would be 6 x 24,500 or 294,000 textile calls. That's making the calls, and thanks to A.P. for selecting us.

► Congratulations to Indian (not Davy Crockett type) Textile Journal on a fine souvenir edition celebrating the first hundred years of the cotton textile industry in India.

Wet Processing

Recent requests for tear sheets on wet processing come from **E. J. Schofield**, Bryant Chemical Co., N. Quincy, Mass.; **A. G. McNair**, F. H. Ross & Co., Charlotte, N. C.; and from **A. D. Hurd**, Russell T. Gray Co., Chicago. TI's editors are proud of their dyeing, bleaching, finishing, slashing, printing, and mercerizing coverage. You can look forward to another prize AATCC issue in September previewing the AATCC Atlantic City meeting.

"Textiles—On The Move
A Live and Active Market"

TI News, issued for over 30 years for advertisers and sales reps, lists new mills, additions, and changeovers. An annual summary for 1954 shows the constant interest in textile

modernization and expansion. Many advertisers asked for added copies. We still have copies for any interested readers.

Textile School Tuition

"Congratulations on the excellent folder [Apr. '55] . . . one error . . . about Lowell Tech. The tuition for Mass. residents is $150, not $100 as stated."

EARL J. WATT
Lowell Technological Inst.
Lowell, Mass.

► Our apologies to Lowell Tech. Many requests have come in for the comprehensive study of textile schools, including **R. O. Day,** Sandoz Chemical Works, Inc.; British Nylon Spinners, Ltd., Pontypool Monmouthshire, England; **G. Hegetschweiler,** Petropolis Brazil, S.A.; Institut Textil de France, Paris; Librarian, Procter & Gamble Co., Cincinnati, Ohio.

Tufted Textiles

Anticipating demands for additional copies of the Tufted Textile Section in our June issue, we have reprints which are available upon request so long as the supply lasts. **A. E. Wingate,** Canoga Park, Calif., sends in card requesting further information on several TI pages, stating "Forming carpet mill in Cal."

Paint for Oil Stained Walls

Another card request for more data from **John W. Swenson,** Pres., Treas., Fergus Falls (Minn.) Woolen Mills, says "What we are looking for is a paint to go over oil stained plaster walls."

Got Any Industrial Toweling?

A. J. Malor, Industrial Laundry Service, 88 Robinson St., Leamington, Ont., Canada writes " . . . unfortunately we cannot contact proper concern that manufactures industrial toweling. . . . "

Ashworth Series On Carding

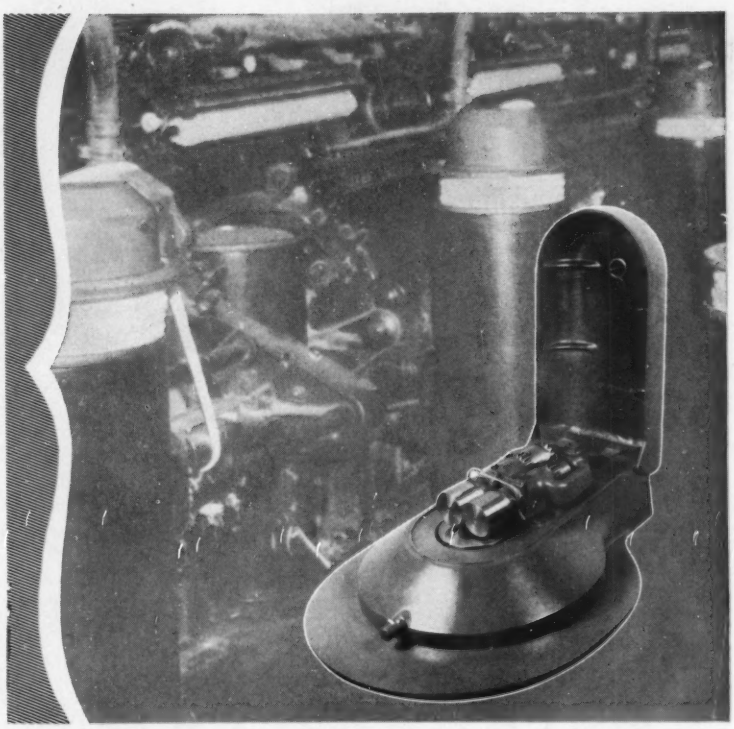
"Please send us 12 sets of the series of Ashworth Brothers Articles on 'Carding is the Foundation for Quality' (1954) . . . "

W. T. MURPHY
Asst. Supt.,
Union-Buffalo Mills
Union, S. C.

► The Ashworth series, the finest thing ever done on carding, is now in its second year. Reprints are still available on most 1954 issues from Ashworth Brothers, Inc., Fall River, Mass.

"Spinners Spin, Cleaners Clean"

"Would you please send us two or three copies of the article written by George Tucker, pertaining to spin-



SOUTHERN STATES COILER HEADS MAKE CONVERSION TO LARGER CANS A SELF-PAYING PROPOSITION

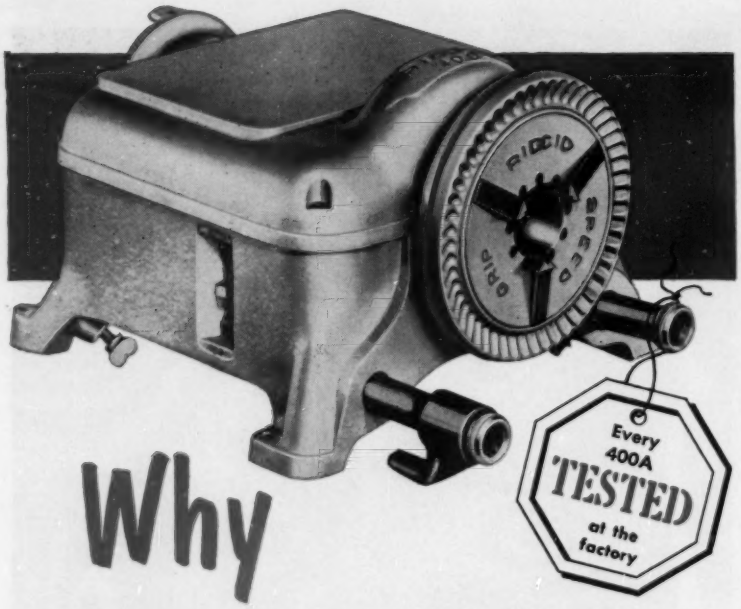
Every mill man with an eye for ways to cut card room operating costs knows the advantages of larger cans. But what some don't realize is that Southern States conversions are so economical that they pay for themselves—a fact proved by case histories of mills throughout the country.

The Southern States Universal Coiler Head, illustrated above, is designed for either 14- or 15-inch cans. It is adaptable to any make of coiler. Using this head, intermediate gearing, coiler base and *your existing stand,* an inexpensive installation can be made in your mill.

Then you can enjoy all of these advantages: simplified oiling; ease of maintenance; smaller parts inventory; more efficient handling; lower operating costs; and improved quality. The photograph shows the simplified design of this head. Notice the streamlined cover and bonnet. Cut tooth gears and oilite bearings are used throughout. It is precision built for years of satisfactory service.

Get full facts from your Southern States representative, or send your request direct to the home office for a quick reply.

SS®
SOUTHERN STATES
EQUIPMENT CORP.
HAMPTON, GEORGIA



Why

thousands upon thousands of

RIDGID

400A Power Drives are now in use

Smart Performance—Efficient as it looks, 400A powers your hand pipe cutters, reamers, threaders with new ease, saving valuable time. New type wrenchless Speed Chuck operates fast, grips pipe, conduit, rod tight both forward and reverse. Quick-action centering device on rear shaft turns with pipe. Power? Plenty for pipe to 2", even to 12" with geared tools!

Really Durable—Like all RIDGID products, 400A is famous for durability. In every way, it's a lot more for your money.

See it, try it, buy it at your Supply House!

The Ridge Tool Company • Elyria, Ohio, U. S. A.

RIDGID
Work-Saver Pipe Tools

Shorts and Remnants

ning labor cost and quality [Sept. '54] . . . "

JAMES W. HEACOCK
Talladega Foundry & Machine Co.
Talladega, Ala.

Many Inquiries

" . . . We appreciate also the many inquiries which you have referred to us."

CHARLES F. STRANDBERG
Strandberg Engineering Labs., Inc.
Greensboro, N. C.

Care of Supervisors

"Have you any reprints available on 'Treatment and Care of Supervisors' [Page 114, May '55] . . . "

C. L. MOORE
Night Supt.,
Borden Mfg. Co.
Goldsboro, N. C.

Buyer Wants Addresses

"Would you please forward us the address of the following companies: Stellite American Corp. [N. Y. C.]; Tillicum Rubber Co. [Lacey, Wash.] . . . "

J. O. STONE
Buyer
U. S. Rubber Co.
Hogansville, Ga.

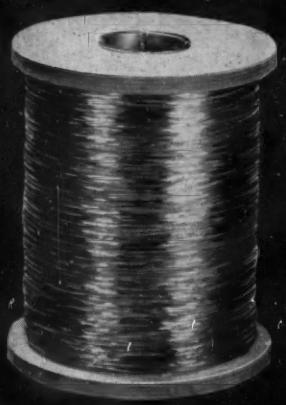
► Odds & Ends: **Lucille P. Caterson** of St. Petersburg, Fla., has a full color 18" x 24" oil painting of a cotton stalk for sale. . . **O. Timberlake,** Totowa Boro, N. J., wants books on designing for shaft work. . . Ministerio de Comercio de La Nacion, Buenos Aires Rep. Arg. S.A. wants a copy of "Core Testing To Determine Wool Yield and Shrinkage" [Jan. '50]. Publicity firms get hard up—one even sends in article on a School for Listening; we won't even mention it.

► Historical note: We did not mean to slight our friends in Maine, Massachusetts, Vermont, North Carolina, South Carolina, and Rhode Island in confining our Independence Day remarks to July 4. Me. and Mass. have Patriots Day, Apr. 19; Vt. has Bennington Battle Day, Aug. 16; R. I. has R. I. Independence Day, May 4; N. C. & S. C. have Mecklenburg Declaration of Independence Day, May 29. Oh yes, Texas, too; they have to have one of their own—Texas Independence Day, Mar. 2.

Two important names in the Textile Industry . . .

BRANSON and LASSITER . . .

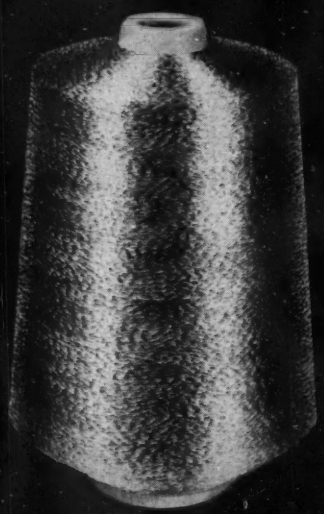
unite to bring you



NEW, GLITTERING

FAIRTEX®

Metallic Yarns
Supported Metallic Yarns
Mylar* Metallic Yarns



Whether you weave, knit or crochet . . . whether you work in cotton, wool, silk, linen or the synthetics . . . give your fabrics greater eye-appeal and buy-appeal with new, glittering FAIRTEX Yarns.

These new FAIRTEX Yarns are backed by many years of experience and fifteen months of research and development. To Branson Company's comprehensive knowledge of weaving and knitting has been added Lassiter Corporation's notable proficiency in the plastics field.

FAIRTEX Metallics are non-tarnishing, highly color-fast and heat-resistant . . . they may be fabricated with ease on practically any type of machine.

FAIRTEX Metallic, Supported Metallic and the new Mylar* Metallic Yarns are available now in a wide range of sparkling colors to meet the designers' every requirement.

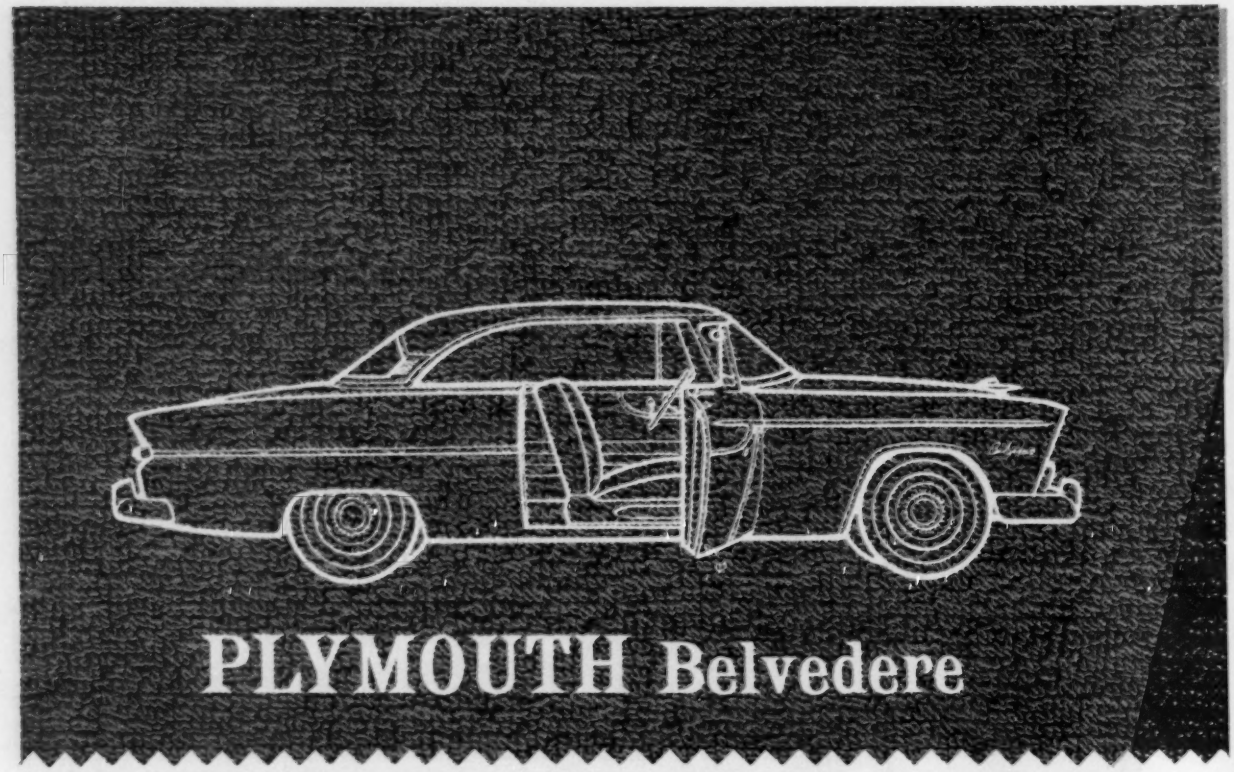
*Registered Trademark for Dupont's Polyester Film.

FAIRTEX® YARNS

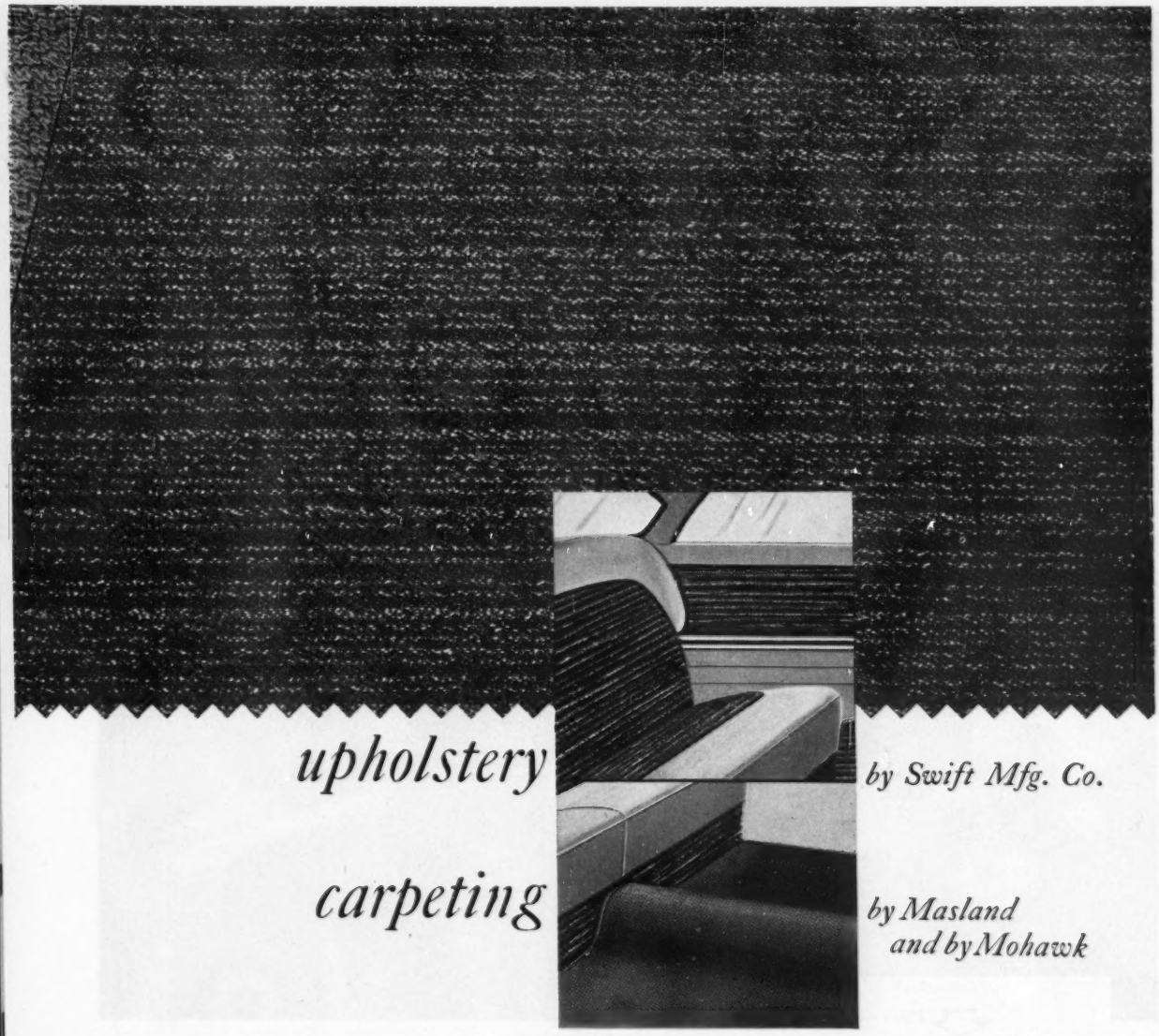
METALLIC • SUPPORTED METALLIC • MYLAR* METALLIC

Fairtex Corporation • Charlotte, N. C.

CHICAGO	CHARLOTTE	NEW YORK
Napier & Harshman	Lanier Branson, Jr. and J. E. MacDougall, Jr.	Robert Napier
3555 Peterson Ave.	1808 Liberty Life Bldg.	51 E. 42nd St.



blends



upholstery *by Swift Mfg. Co.*

carpeting *by Masland and by Mohawk*

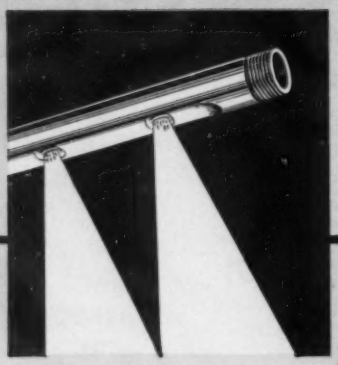
using THE NEW Nylon Staple

At a time of increasing emphasis on car interiors, IRC is proud that the biggest names in the automotive industry are featuring interior trim blended fabrics using the NEW Nylon Staple—introduced less than a year ago! Leading Mills report it is a better nylon staple, for it has seven new and distinctive features capable of producing new and better effects.

- **MORE RESILIENCY** *with less* **CRUSHABILITY** • **GREATER STRENGTH**
- **BRIGHTER LUSTER** • **BETTER CRIMP** • **GREATER RESISTANCE TO ABRASION**
- **LOWER DYE COSTS** • **NEW ECONOMY FOR YOU**

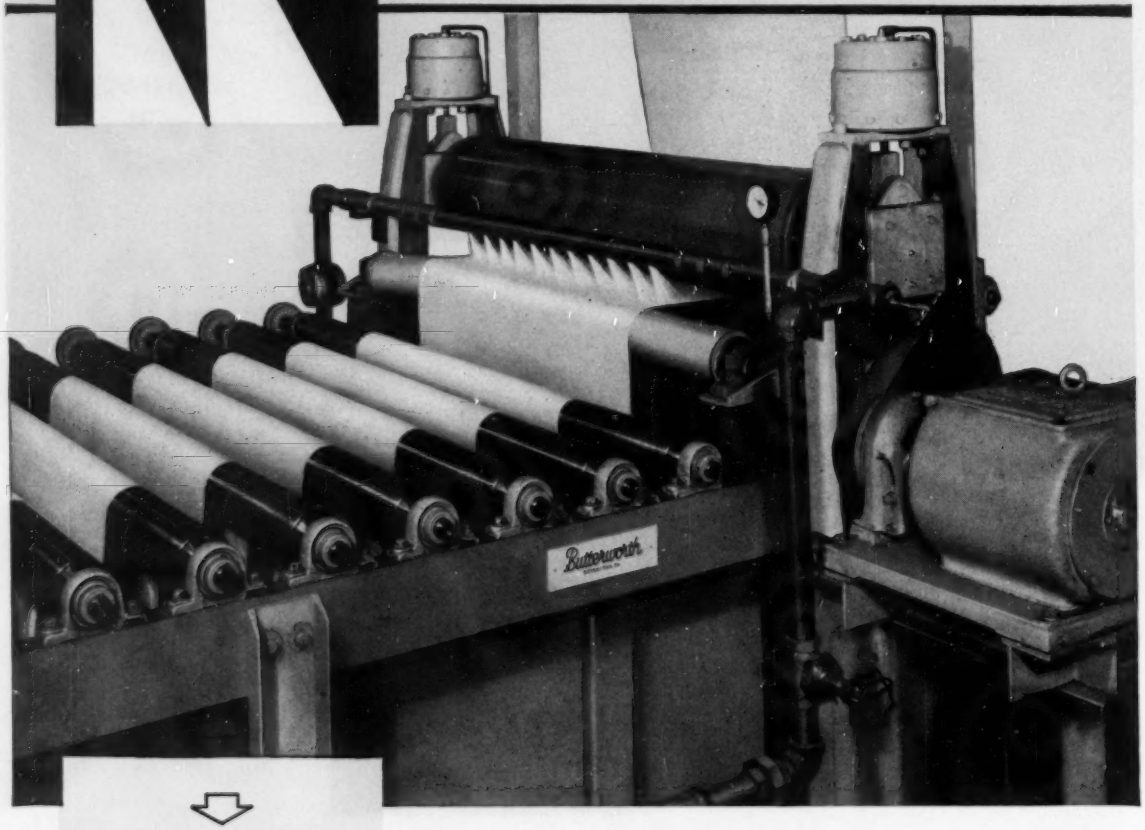
I·R·C Industrial Rayon Corporation

Sales Offices: 500 Fifth Avenue, New York 36, N. Y. • 627 Guilford Building, Greensboro, N. C.



Emerson

FAN-SHAPED SPRAY



Sprays every inch of cloth evenly in widths from 24 to 256 inches

Now there is complete spray coverage of every inch of cloth for every wet processing operation. No clogging at any time — every spray nozzle is kept clear by rotary action of brushes inside the pipe.

The famous Emerson Spray, used for many years with amazing success in the wet end of the paper industry, is now engineered for your wet processing machinery by Butterworth engineers.

One of the largest mills in the East bought an Emerson Spray to replace an ineffective shower pipe on just one machine . . . now they have installed 35. The Emerson Spray actually pays for itself in reduced water consumption, improved processing.

Talk to a Butterworth engineer or send for descriptive folder.

BUTTERWORTH
Serving the Textile Industry Since 1820

H. W. BUTTERWORTH & SONS CO.

Bethayres, Pennsylvania

1211 Johnston Bldg., Charlotte, N. C. **187 Westminster St., Providence, R. I.**

Representatives in Principal Cities of the World

Machines for Bleaching, Boiling-Out, Dyeing, Mercerizing, Finishing, Embossing
Pot Spinning Machines for Synthetic Fibers : : Calender Rolls : : Tenter Chains

Franky the horse of a different color!

I'M READING MY FAN MAIL!

"I'm reading my fan mail," says Franky,
"And frankly I'm feeling my oats!"
No wonder he's flattered,
From points widely scattered
The trade has been sending him notes:

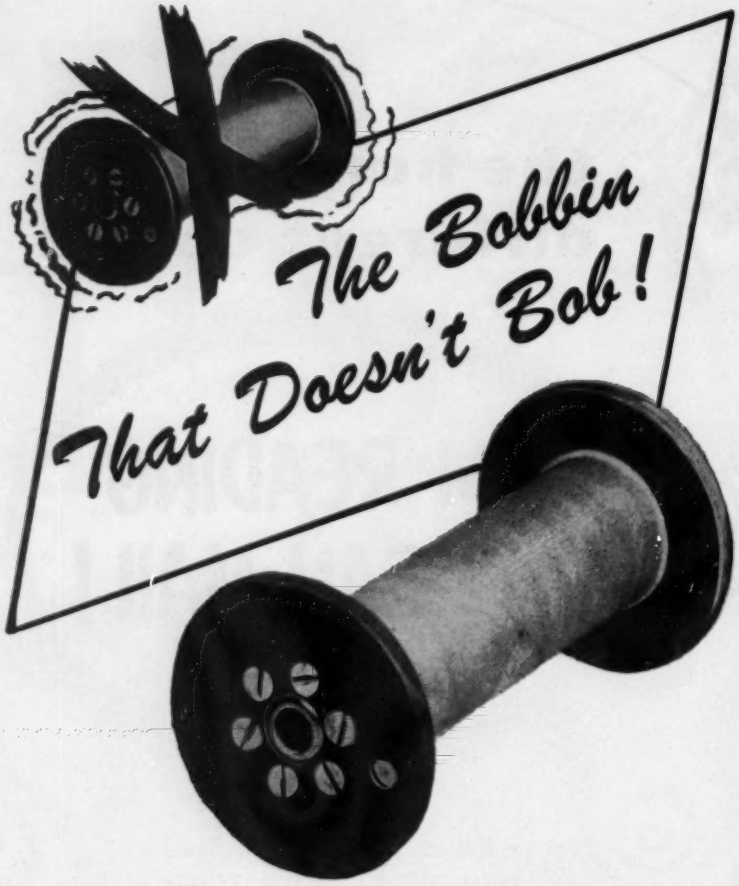
They talk of the weights he can carry,
Admire his refusal to run;
And some even hint
He works without stint
Because he considers it fun...

While Franky is pleased at this rumor,
He feels that the credit is due
In part to his keen sense of humor,
But more to his keen sense of hue.

Franklin Process

COTTON YARNS & CUSTOM YARN DYEING • LARGEST PACKAGE DYERS IN THE WORLD

PROVIDENCE• PHILADELPHIA• GREENVILLE
CHATTANOOGA• FINGERVILLE, S. C.
New York Representative — 40 Worth Street



Years of smooth running are built into every EPI Bobbin . . . first by precision machining each part from the best materials available . . . and second by *dynamically balancing every bobbin.* Long after many other bobbins are bob-bob-bobbin and jiggling, EPI Bobbins are running smoothly and serenely—making even packages and protecting spindles and machines from expensive wear.

The dollars and cents value of EPI Bobbins is more clearly apparent when you remember that much of the damage—poor wind, uneven packages, and excessive spindle and machine wear—is done *before* defects are noticeable. You'll be money ahead when you specify EPI Bobbins for Nylon and other synthetic fibres.

Write or telephone for full information.

New England Representative: J. H. Windle, Jr., 231 S. Main St., Providence, R. I.

ENGINEERED *Plastics*

INCORPORATED

Gibsonville, North Carolina

Personal NOTES

ABOUT MEN YOU KNOW

Edward M. Abbot, formerly president of the company, was recently elected chairman of the board of directors of Abbot Worsted Co., Forge Village, Mass. New president of the company is **Alexander A. Cameron.** Treasurer of the company, **E. Kent Allen,** was elected general manager. **Braley A. Cameron** was elected vice-president and sales administrator.

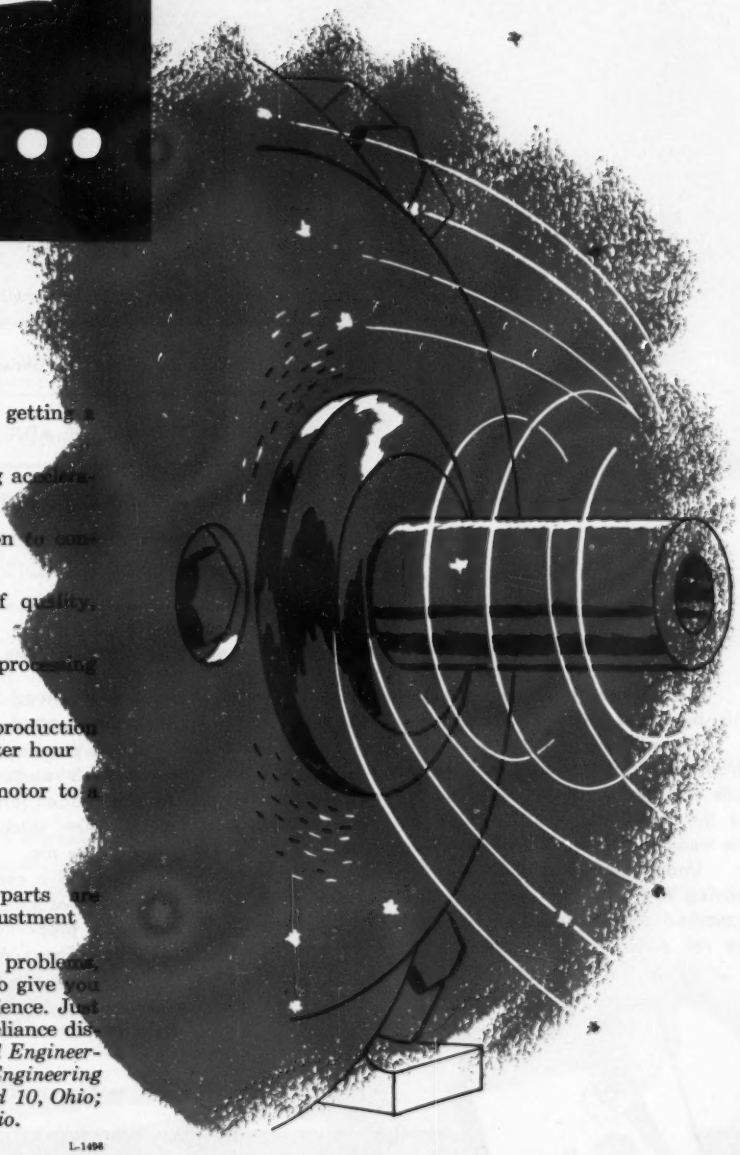
About August 1 **Brigadier General August Anderson** will take command of the Philadelphia Quartermaster Depot, succeeding **Major General Robert P. Hollis,** according to an announcement.

Having served for a period of fifty-one years with the Winchester Knitting Mills, Winchester, Va., **John A. Anderson** has retired. Mr. Anderson was knitting room foreman at the time. A gold watch was presented to him during a banquet commemorating the occasion.

The newly created post of executive vice-president of Bachmann-Uxbridge Worsted Corp. has been filled by **Louis Bachmann, Jr.,** who has served as vice-president since 1948. Named vice-president of credit was company secretary **Albert H. Bullwinkel.** Vice-presidents of men's wear and women's wear sales, respectively, are **Harry S. Stern, Jr.,** and **Alvin H. Zagor.** Promoted to vice-president in charge of manufacturing was **Harold F. Smith** who was formerly assistant general manager. New treasurer is **H. Nelson Flanders, Jr.,** formerly assistant treasurer. New controller and assistant treasurer is **William P. Barron. William J. Thornley,** formerly assistant to president **Harold J. Walter** in Uxbridge, Mass., is now manager of the Southern Division and assistant treasurer. Filling the new position of general manager of Barre Wool Combing Co., Ltd., division of Uxbridge, is **L. M. Yacubian.** Occupying the newly formed post of general manager of manufacturing is **George M. Chappell.**

New officers of Shannon Hosiery Mills, Columbus, Ga., recently acquired subsidiary of Chadbourn Hosiery Mills, Inc., are the following: president and treasurer—**J. C. Bolles;**

IF...



- You are spending too much time getting a tool to and from an operation
- You are having trouble controlling acceleration under tension
- You need a more precise operation to control scrap
- You need hair trigger control of quality, quantity and size
- You want to start and stop your processing line faster
- You would like to leave your production line virtually unattended hour after hour
- You require re-acceleration of a motor to a previous exact speed
- You want centralized control
- Your mechanical transmission parts are wearing out or getting out of adjustment

Or if you have other motor-drive problems, our sales engineers are prepared to give you the benefit of our 50 years' experience. Just get in touch with your nearest Reliance district sales office, or write to *Applied Engineering Division, Reliance Electric & Engineering Co., 1085 Ivanhoe Road, Cleveland 10, Ohio; Canadian Division, Welland, Ontario.*

L-1498

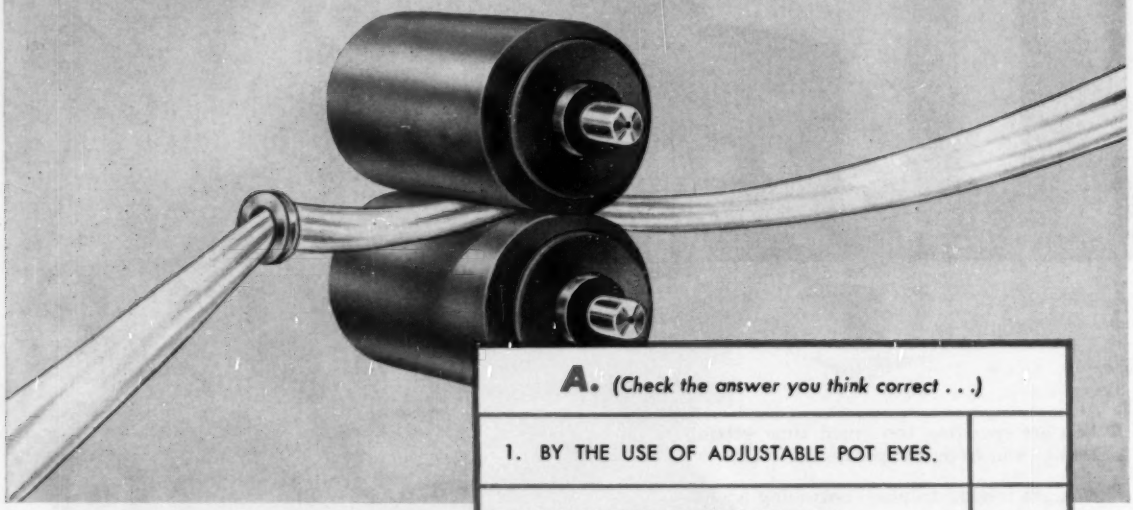
RELIANCE ELECTRIC AND ENGINEERING CO.

Builders of the Tools of Automation

STOWE-WOODWARD Maintenance Tips

for better finishing at lower cost

Q. HOW CAN THE LIFE OF RUBBER ROLLS BE PROLONGED IN HANDLING ROPE CLOTH?



A. *(Check the answer you think correct . . .)*	
1. BY THE USE OF ADJUSTABLE POT EYES.	
2. BY AVOIDING ROPE TENSION.	
3. BY AVOIDING KNOTS OR LAP-OVERS.	

You'll find the correct answer in these Maintenance Tips

All three answers are correct. Most mill men know this, but many neglect these simple precautions.

Cloth ropes, by their very nature, place an unusual strain on rubber covered rolls; and even though these rolls are small, considerable savings may be realized by the installation of adjustable pot eyes, equalizing the wear evenly across the entire face of the roll.

Undue tension on the rope . . . either entering or leaving the rolls . . . increases maintenance costs to a marked degree. Tension causes either pull or drag on the roll surface, resulting in an abrasive wear which hastens the need for regrinding the roll . . . and does the cloth no good.

Roll pressures should be maintained at the minimum which results in efficient extraction to compensate for the sudden jarring increase in pressure which takes place when stitched ends, knots, or lap-overs pass through the nip.

Beyond a certain pressure the law of diminishing returns comes into effect, and roll wear increases rapidly without a proportional increase in extraction.

Your Stowe-Woodward Sales Engineer will be glad to help you with any problem regarding the selection, care, or use of rubber covered rolls. His counsel can help you cut operating costs . . . take advantage of it.

"RUBBER ROLLS with a REPUTATION"

S-W INC.

STOWE-WOODWARD, Inc.

Craftsmen in rubber rolls

NEENAH, WISCONSIN — NEWTON 64, MASSACHUSETTS — GRIFFIN, GEORGIA

Now you can get new Hyster

"HYSTAMATIC" DRIVE

fluid torque converter for YC-40 and UC-30 Lift Trucks (4000 and 3000 lbs.)

The most positive "Hairline Inching Control" for stacking, carloading and close-quarter operation.

"Hystamatic" offers the *best control of lift truck power,* makes possible smoother, faster, more effective lift truck operation.

"Hystamatic" incorporates all these latest design advances in fluid converter-type drives:

Automatic Operation speeds forward-reverse shifting—takes full advantage of Hyster fastest lifting speed.

Smoother Operation with finger-tip ease. Sudden shock loads in transmission are cushioned by hydraulic oil in torque converter. Power surges are eliminated.

No Engine Lugging. Torque converter automatically adjusts transmission reduction to driving conditions.

Simplicity of Design makes "Hystamatic" easy to service

Overhead guard is optional equipment.

PLUS...

Hairline Inching Control. Slip for starting and inching is taken through torque converter. Operator can position load in tightest quarters with precision. *"Hystamatic" greatly improves performance in stacking loads where it is necessary to inch and raise the load at the same time.*

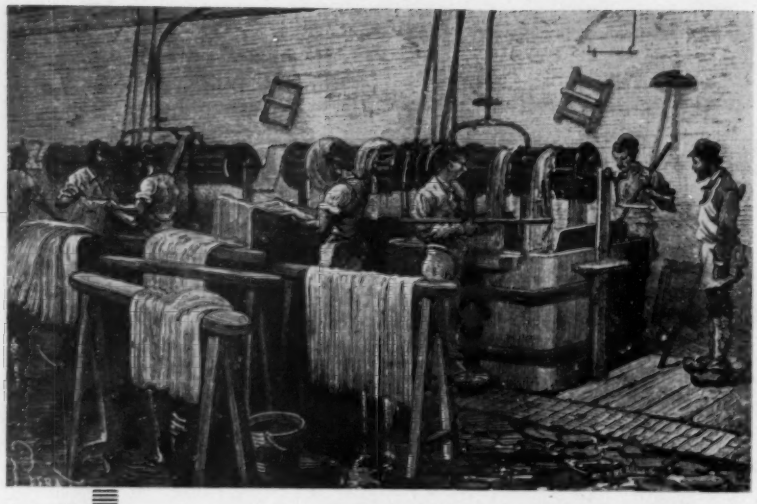
Precision Control of Power to Wheels improves traction where traction is critical. Just the *right* amount of power to drive wheels is obtained by control of engine speed with throttle.

Call your Hyster Dealer for full details, or write for Form 1330.

HYSTER COMPANY

2902-57 N. E. Clackamas Street, Portland 8, Oregon
1010-57 Myers Street, Danville, Illinois
Hyster N.V., Nijmegen, The Netherlands

Four Factories: Portland, Oregon; Danville, Illinois; Peoria, Illinois; Nijmegen, The Netherlands.



An Early Dyeing Plant. After a wood engraving circa 1870

"THOSE DAYS ARE GONE FOREVER"

The gentlemen wearing wooden shoes and looking confused in the picture above worked long and hard to achieve uniformity of color . . . they rarely got it. Modern MORTON DYEHOUSE MACHINERY does in minutes what it took days to do in the 19th century, and does it uniformly.

MORTON MACHINE WORKS pioneered in the development of machinery to dye stock and yarn packages in the 300 degree range. The MORTON SYSTEM Equipment allows the processing of all types of packages, beams, and stocks automatically.

MORTON products are designed and built to comply with the requirements of A.S.M.E. Code and are authorized to bear the appropriate code symbols.

MORTON

MACHINE WORKS, INC.

COLUMBUS, GEORGIA U.S.A.

Personal NOTES ABOUT MEN YOU KNOW

vice-presidents—**William J. Leath, Charles E. McCarthy,** and **Sam L. Black;** vice-president and assistant treasurer—**Guy E. Tysor;** secretary—**E. M. Hatch;** assistant secretary and treasurer—**E. M. Hicks.**

George W. Biven, formerly in the engineering department of the Wood Mill of American Woolen Company in Lawrence, Mass., is now plant engineer of The Felters Co., Johnson City, N. Y.

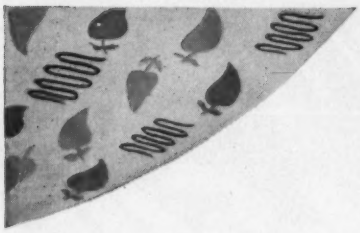
Verne O. Bobbitt, personnel director, Lynchburg Division, Consolidated Textile Co., Inc., was recently presented a George Washington Honor Medal and a national second place award check by Freedoms Foundation at Valley Forge, Pa., in a ceremony honoring 13 nominees from the State of Virginia over Television Station WTVR, Richmond. According to the announcement, the award was made to Mr. Bobbitt for an article, "The Miracle Which Is America," which appeared in the Consolidated Textile News, employee publication of his company.

Now serving as general manager of the Charlotte, N. C., plants of Highland Park Manufacturing Co. is **M. L. Brackett** who was formerly general superintendent. **W. H. McKeown** has been promoted to fill the vacancy created by the elevation of Mr. Brackett. General manager of the Rock Hill, S. C., plant of Highland Park is **Z. G. Willis** who was formerly superintendent. The late Arthur S. Jarrett had been general manager of all plants since 1937.

Ernest C. Bratt, formerly manager of Barrymore Cloth Co., Toronto, is now superintendent of Wyandotte Worsted's Waterville, Maine, plant.

Succeeding **Morris M. Bryan, Jr.,** of Jefferson (Ga.) Mills, Inc., as vice-president of the Cotton Manufacturers Association of Georgia is **Henry McD. Tichenor** of Walton Cotton Mills Co., Monroe, Ga. Mr. Bryan was elevated to association president (see TI for June, page 34). New treasurer of the association is **George Hightower** of Thomaston (Ga.) Mills.

Roy Butler has retired as assistant treasurer of Standard-Coosa-Thatcher Co. of Chattanooga, Tenn. Filling the vacancy created by the retirement of



DESIZING UNIFORMITY

TIME AFTER TIME WITH

RHOZYME LA*

RHOZYME LA is the most dependable desizing enzyme now available to the textile industry.

RHOZYME LA has consistent high quality, is stable in storage, and also exhibits unusual heat resistance in high-speed, high-temperature operations.

For the full story on this low cost, highly efficient agent, write for our technical bulletin.

* **RHOZYME LA** *is another dependable chemical product for the textile industry made by the makers of* LYKOPON.

RHOZYME *and* LYKOPON *are trade-marks, Reg. U.S. Pat. Off. and in principal foreign countries.*

CHEMICALS FOR INDUSTRY

ROHM & HAAS COMPANY

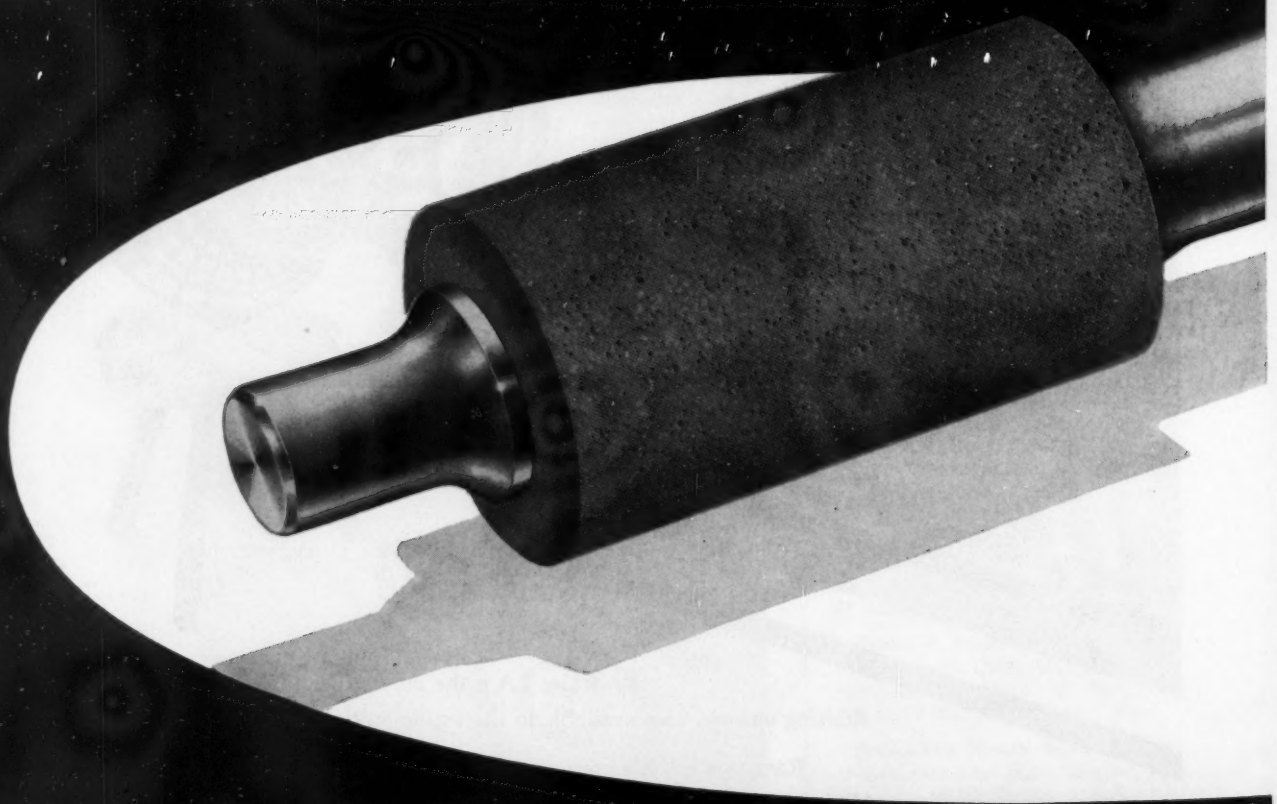
WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

Announcing the All New Cot

Dayco EW-540

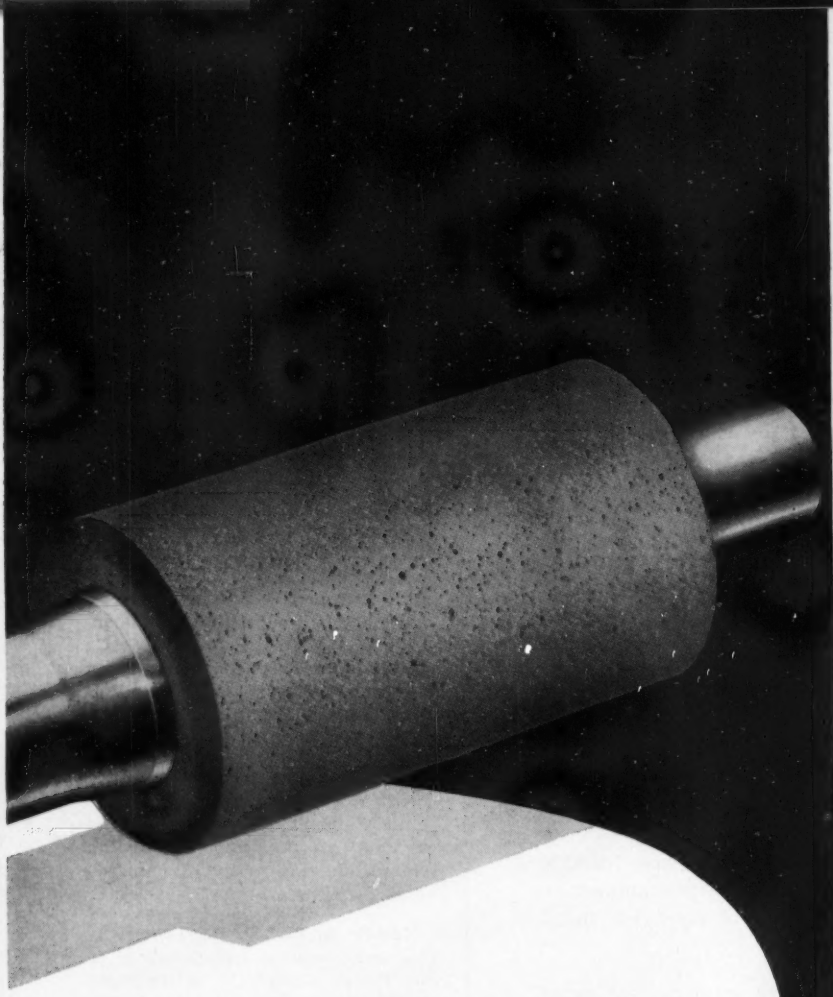
Here's news about the most important advancement in cot performance in the last decade!



Won't glaze or slicken—reduces buffing to a minimum!

Made with thousands of microscopic cells which are opened up by the continuous traversing of the yarn, Daycos *stay dry*—never become glazed or slick. This means fewer buffings, longer runs between buffings. For all the money-saving facts request your copy of the new Dayco EW-540 data sheet.

Dayton Rubber Co., Textile Division, Dept. 305,
401 S. C. Nat'l. Bank Bldg., Greenville, S. C.



Amazing, New Micro-Porous Surface RENEWS itself!

Exclusive with Dayco EW-540 Cots is a cellular structure which *renews* itself continuously through the normal process of wear. This constant porosity relieves surface tension—the major cause of lap-ups and ends down—for the life of the cot. This means big savings in time and money, as well as increased production, for mill operators everywhere.

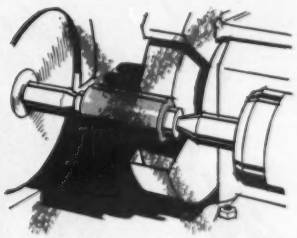
GOLDEN JUBILEE

Dayton Rubber

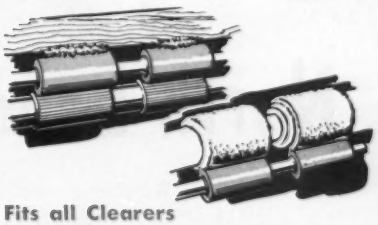
50 YEARS OF PROGRESS

Dayco and Dayton Thorobred Textile Products for Better Spinning and Weaving

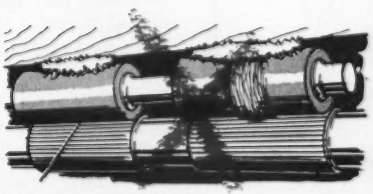
Only Dayco EW-540 Cots have all these features:



Runs 2 to 3 times longer without buffing—Tested under actual mill conditions these sensational Dayco EW-540 cots have been in operation for over 2½ years. During that period *not one test cot has ever required buffing*. Important, too, Daycos will not lap even in 65 to 70% humidity—nor will they pick up oils or cotton residue.

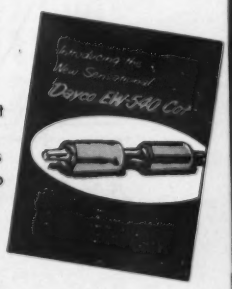


Fits all Clearers
New Daycos are effective general purpose cots and work to perfection with either flat or revolving clearers. Superior, in every respect, to any other cot on the market, Daycos have proved their ability to keep eyebrowing to the absolute minimum.



Prevent Lap-Ups and Excessive Ends Down— Because Dayco cellular porosity relieves surface tension, lap-ups are virtually eliminated. Ends down are guided directly to the waste roll and are prevented from becoming entangled in other strands which would cause more ends down to occur.

Get the Facts
No mill superintendent can afford to be without the complete facts on the amazing Dayco EW-540 Cots. Send for your copy of Fact Sheet TODAY!



© D.R. 1955

North Leads The Way!

With over half a century of experience, FRANK G. NORTH, INC., leads the way in the manufacture of the greatest possible range of top-notch sizing compounds.

High production and quality weaving are made possible by proper size, correct application and alert service. You can call on NORTH with confidence for all three . . . and for assistance in *all* technical and practical matters relating to size.

One of the largest manufacturers of sizing compound, gums, waxes and kindred products for weaving yarns, NORTH'S complete sales staff is made up of men who are technicians as well as salesmen. They are thoroughly trained in all departments of the mill and are anxious to be of service. Call on them today or anytime.

FRANK G.
NORTH
INCORPORATED
MANUFACTURING CHEMISTS

Atlanta, Ga. • P. O. Box 123, Sta. A • Phone RAymond 2196
Marietta, Ga. • P. O. Box 92 • Phone Marietta 9-4323

Personal NOTES ABOUT MEN YOU KNOW

Mr. Butler is **W. Lane Verlenden.**

The Research Institute of America has conferred its second annual Award For Merit on 201 executives of business and industrial concerns in the United States, England, Canada, and Hawaii for contributions they have made to executive skills. The winners contributed ideas for increasing production and profits by attention to the human element in business. Those associated with the textile industry who were so honored are: **P. H. Burrus, Jr.,** vice-president and general manager of Jackson Mills, Wellford, S. C.; **Alex Crawford,** assistant plant superintendent, Joanna Cotton Mills Co., Joanna, S. C.; and **Stefan L. Grapnel,** chief engineer, Belding Heminway Co., Inc., Putnam, Conn.

Stuart H. Carroll, who has been executive director of the Philadelphia Textile Institute Foundation and director of public relations of the Institute, has been appointed to the staff of the University of Pennsylvania Development Fund.

Horace A. Carter, former executive vice-president and treasurer of the William Carter Co. of Needham Heights, Mass., was recently elected president of the company succeeding the late William H. Carter. **Lyndall F. Carter,** vice-president, was elected to the board of directors.

Frederick T. Davies, who has been associated with Hightstown (N. J.) Rug Co., since 1950, has been appointed plant manager of the new velvet division.

J. A. Dixon, of Courtaulds (Canada) Ltd. in Montreal, has been elected president of the Textile Technical Federation of Canada. Other officers of the federation, chosen for one-year terms, are: vice-presidents, **A. E. Black,** York Knitting Mills, Toronto, and **F. J. Knight,** Hubbard Felt Co. Ltd., Montreal; and honorary treasurer **F. M. Porteous,** Dominion Rubber Co. Ltd., Kitchener, Ontario.

Vice-president in charge of sales of the Minneapolis Knitting Works, Utica, N. Y., is **J. J. Dennemeyer,** who has been with company since 1948 in a sales and merchandising capacity.

Sam Diamond has been elected

(Continued on page 35)

Here is an unretouched photograph of a handful of trash taken from a Super-Jet Air Lint Cleaner that was in actual operation on strict low middling cotton.

HOW TO AVOID DAMAGED COTTON... AND SAVE MONEY

Modern harvesting methods have made great changes in the character of cotton as received by the spinner today. About 30 per cent of the entire cotton crop is gathered by pulling the whole boll off the plant by hand, or by stripping off bolls, leaves, and limbs mechanically. Sometimes 3000 to 4000 pounds of this stuff must go to the gin to make a 500-pound bale of cotton.

Then, after ginning, this already overworked cotton may be put through a saw cylinder for further cleaning. This saw cylinder is much like a licker-in, and, like the licker-in, has a tendency to break up foreign matter it does not take out. But, whereas the licker-in may handle five to 15 pounds of cotton an hour, the saw-type cleaner in the gin may process 1000 pounds or more.

By spinning mill standards, this is a very harsh and damaging process.

The prudent mill manager avoids such damaged cotton, and by installing the Aldrich-Lummus Super-Jet Cotton Cleaning System, can use trashier cotton of better character, save money on his cotton, and make better yarn.

AldricH MachinE WorkS

Greenwood, South Carolina

New *Pneumafil* Collector

Uses Specially Designed Allis-Chalmers Motor

The recently developed *Pneumafil* "Economizer" Collector System means a further improvement in spinning room conditions.

An important new feature is the provision for discharging the air around a 360-degree periphery of the discharge cover. Air is gently released in all directions through 224 specially designed vents. There are no disturbing drafts.

SPECIAL MOTOR

An important component is the special Allis-Chalmers motor. Engineers of both Pneumafil Corporation and Allis-Chalmers Mfg. Co. combined their experience in this design.

Note that the smoothly curving front end forms the inner wall of the venturi air channel, funneling the air into the fan. The smooth, unobstructed air flow in this design provides adequate cooling. Exposed punchings of stator core also assist in heat dissipation. Heavy duty, size 304 sealed bearings are used to cut maintenance.

SERVICE EVERYWHERE

Users of the new *Pneumafil* "Economizer" System are assured prompt, dependable service on these Allis-Chalmers motors. Certified Service Shops in all major textile areas provide factory-approved methods and parts. Allis-Chalmers, Milwaukee 1, Wisconsin. A-4762

Other Allis-Chalmers Textile Drives

● **SPINNING**

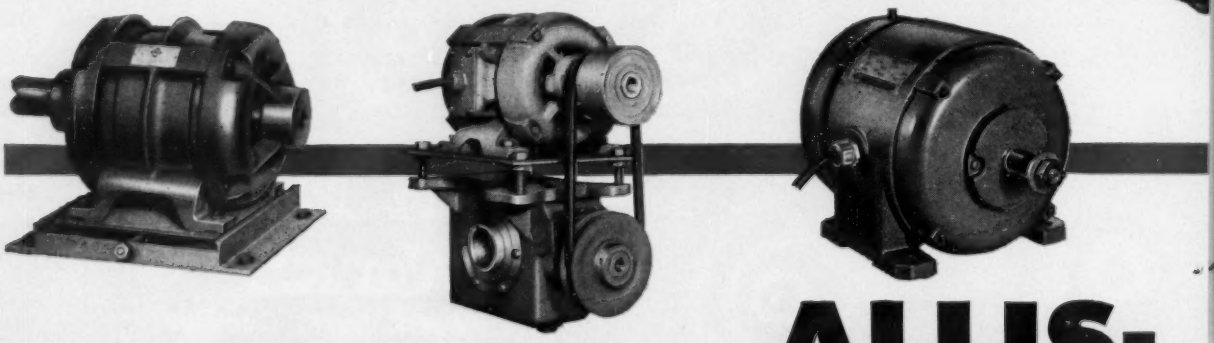
Wide-open air passages and powerful fans of *Quick-Clean* design sweep dirt and lint right through and out of these motors. Sealed, double-width bearings are used.

● **CARD DRIVE**

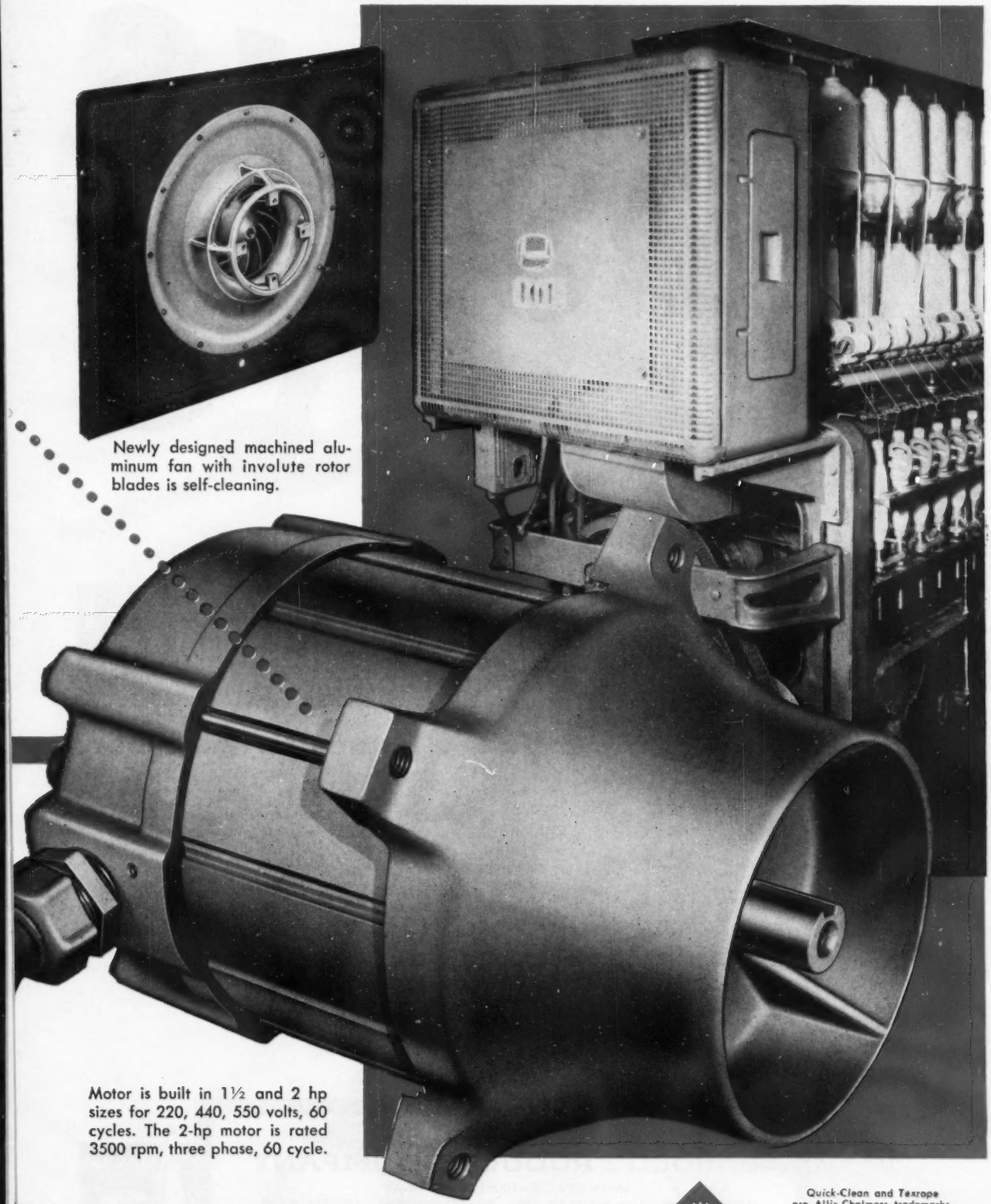
Allis-Chalmers combines a *Quick-Clean* motor, *Texrope* drive and an efficient gear reducer to make a compact, reasonably priced power-package for carding machines.

● **WEAVING**

Allis-Chalmers loom motor has oversize rotor, stator and bearings. Rotor diameter provides maximum inherent flywheel effect; slip produces minimum speed variation. External flywheel can be furnished.



ALLIS-



Newly designed machined aluminum fan with involute rotor blades is self-cleaning.

Motor is built in 1½ and 2 hp sizes for 220, 440, 550 volts, 60 cycles. The 2-hp motor is rated 3500 rpm, three phase, 60 cycle.

Quick-Clean and Texrope are Allis-Chalmers trademarks.

CHALMERS

A-C ALLIS-CHALMERS

For further information use Handy Return Card, Page 163

When it's textile SPOOLS

SONOCO

is the name to remember!

SINGLE HEAD SPOOLS, TOO!

SONOCO offers a complete variety of standard spool types or can make them to fit your needs in special sizes. Widely used for fringe, tape, braid, narrow and wide fabrics, thread, yarn, cord, rope and many other items. Available with plain, printed and treated heads.

Inquiries should specify head diameter, traverse, bore and barrel diameter.

SONOCO also makes standard and special tapered base, single head thread spools in fibre and plastic. Barrels can be scored, smooth, flocked or ground. Plastic spools available in a wide variety of solid colors. Fibre may be ordered with colored lacquer tips for identification.

SONOCO PRODUCTS COMPANY

MAIN OFFICE—HARTSVILLE, S. C.

MYSTIC, CONN. LOS ANGELES, CAL. BRANTFORD, ONT. LOWELL, MASS.
PHILADELPHIA, PA. AKRON, IND. GARWOOD, N.J. GRANBY, QUEBEC

MEXICO: Sonoco de México, S. A., Apartado 10239, México, D. F.

DEPENDABLE SOURCE OF SUPPLY

sonoco
SERVES THE WORLD
PAPER CARRIERS
REG. U.S. PAT. OFF.

No. 25*

CIBALAN YELLOW FGL

Cibalan Yellow FGL, a pure yellow shade with extraordinary fastness to light, is the twenty-fifth member of the ever-expanding group of neutral-dyeing, pre-metallized CIBALAN dyes.

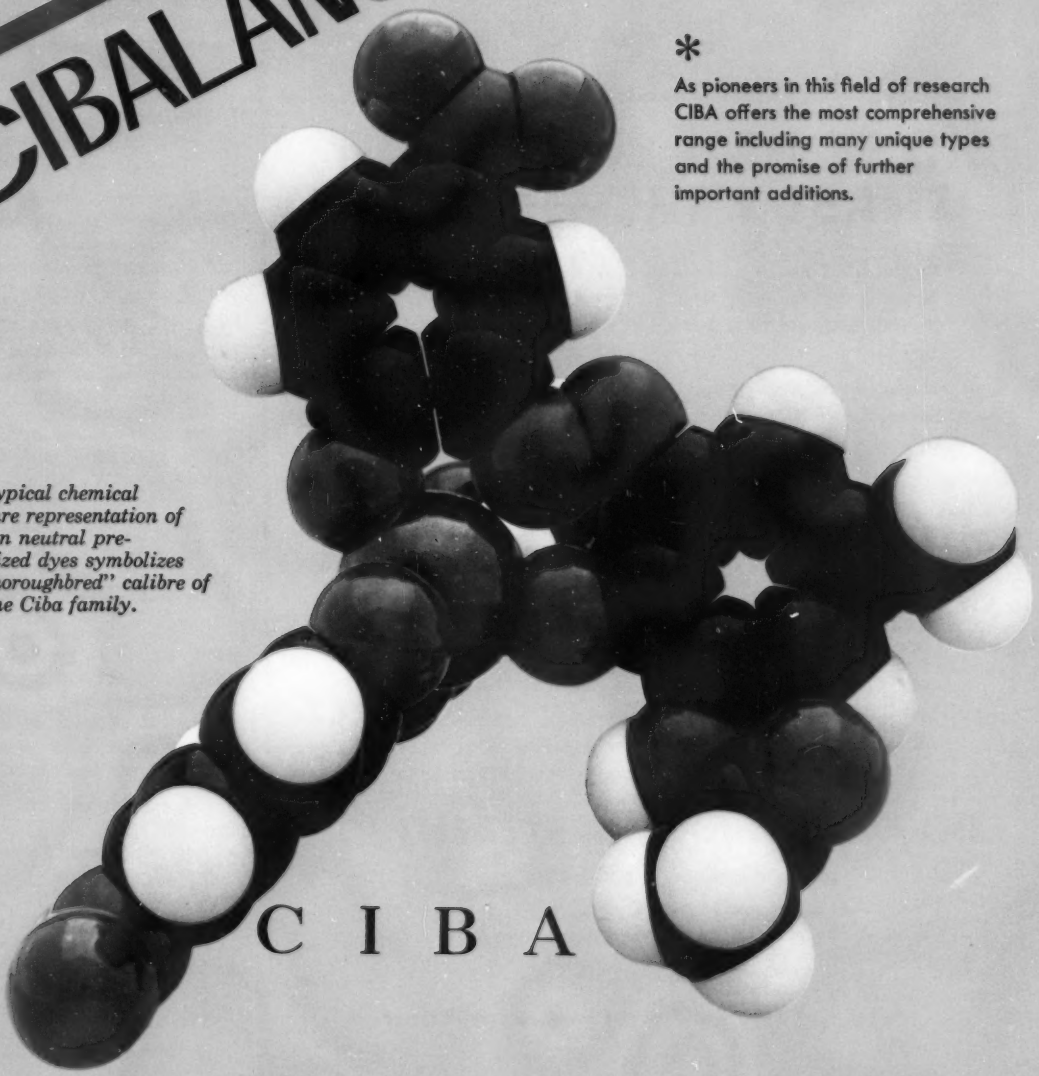
FAST SHADES FASTER!

MORE NEW SHADES!

CIBALANS®

*

As pioneers in this field of research CIBA offers the most comprehensive range including many unique types and the promise of further important additions.



This typical chemical structure representation of Cibalan neutral pre-metallized dyes symbolizes the "thoroughbred" calibre of this fine Ciba family.

CIBA

Personal NOTES ABOUT MEN YOU KNOW

(Continued from page 28)

president of Pons Full-Fashioned Mills, Inc., Valdese, N. C. Other officers are: vice-presidents — **David Diamond** and **Samuel Pons;** secretary —**O. H. Pons, Jr.;** treasurer—**O. H. Pons, Sr.**

Recently appointed a vice-president of Burlington Industries was **James L. Eskridge,** who has general charge of the company's filament weaving operations.

Donald Ferand, formerly overseer of dressing at the Kenwood Mills, Cavendish, Vt., is now with the Crown Woolen Mills, Marcellus, N. Y., in a similar capacity.

Herman Freiberger of Medical Fabrics Co., Inc., Paterson, N. J., recently handed over the presidential reins to **Raymond B. Olsen,** formerly vice-president of the company. Mr. Freiberger, who has been associated with the manufacture of medical bandages for the past 20 years, has retired.

Anthony J. George, formerly foreman of spinning at Gloversville (N. Y.) Knitting Co., is now second shift foreman of spinning at Fonda (N. Y.) Glove Lining Co.

William C. Gibson, Jr., is now overseer of carding at Scottdale (Ga.) Mills, in addition to his duties as overseer of spinning.

John D. Green, general manager of the yarn spinning plants of P. H. Hanes Knitting Co., Winston-Salem, N. C., since July 1953, has been named vice-president and a director. He is in charge of yarn manufacturing. **Edwin E. Maddrey,** assistant secretary, has been given the additional duties of assistant treasurer.

Marshall Gregory, who has been with Interwoven Stocking Co. since 1915, has been named president, succeeding **John W. Mettler, Jr.,** who is now executive vice-president and vice-chairman of the board.

During its 89th annual meeting at Atlantic City, N. J., the Underwear Institute elected **Robert F. Gregory** of H. E. Bradford Co., Bennington, Vt., as chairman of the board. Vice-chairmen elected were: **Thomas D. Russell** of Russell Manufacturing Co., Alexander City, Ala.; **Edward I.**

SHOULD THIS MAN BE ON MANAGEMENT'S TEAM?

In molding employee opinions, in leading group thinking, in "Passing The Word" from supervisors, this man plays as important a part in mill operation as in his all-important work with his wrenches and other tools!

His knowledge of the objectives of management and his understanding of management's philosophy determine the very "vocal" voice he will give to company actions.

Southeastern Engineering Company has developed a successful twelve-hour conference training program in Waste Reduction and Waste Control to aid in giving your Section Men and Fixers the knowledge—other than mechanical—they need in today's competitive economy.

The effects of waste on unit cost and job security; quality losses and their effects; the cost of supplies; the importance of standard competitive job loads; how efficiency affects cost . . . these are a few of the topics discussed with your men.

The good ideas and suggestions that come out of this twelve-hour program will prove of value to your mill. We will appreciate the opportunity of discussing this service with you.

SOUTHEASTERN ENGINEERING CO.

WEST POINT, GEORGIA

Ben H. Crawford
West Point, Georgia

James I. Teat
Box 96-C, Closeburn Road
Charlotte 3, North Carolina

be "size-wise"...choose CLINTON starches

Sizing *is* important . . . and so is finishing. That's why more and more textile mills are choosing Clinton starches.

For warp sizing, Clinton starches are widely used. (In fact, in many mills they're the standards for comparison.) They increase strength . . . reduce abrasion . . . lay fibers . . . lubricate warps. — All these advantages mean improved weaving efficiency.

So for better sizing . . . better serving . . . better finishing — choose starches by Clinton.

and remember : technical service in connection with your specific problems is available upon request.

Quality products
FROM THE WORLD'S CORN CENTER

CLINTON

CLINTON FOODS INC.
Corn Processing Division
CLINTON, IOWA

Personal NOTES ABOUT MEN YOU KNOW

Gruber, Spring City (Pa.) Knitting Co.; **George D. McConnell,** Munsingwear, Inc., Milwaukee, Wis., and **James F. Nields, Jr.,** Ware (Mass.) Knitters, Inc.

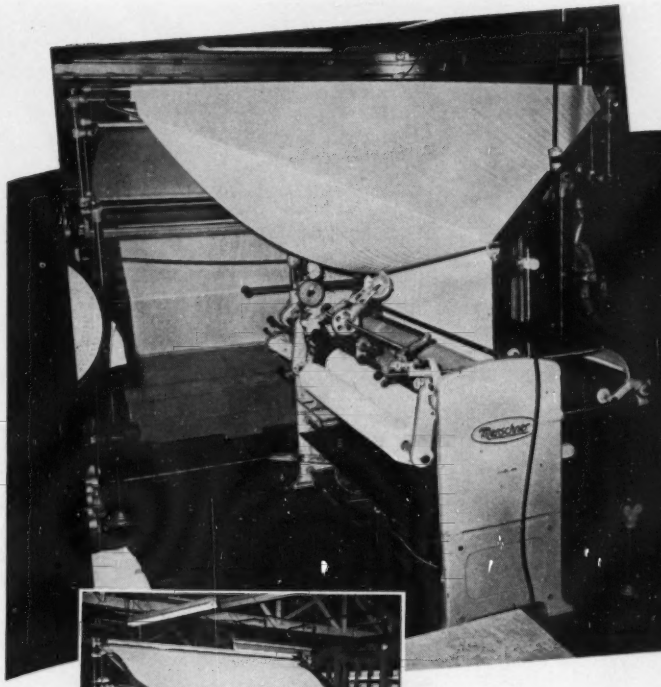
During the recent annual meeting of the South Carolina Textile Manufacturers Association, **F. E. Grier,** president of The Abney Mills of Greenwood, S. C., was elected president. New vice-president of the association is **H. B. Carlisle, Jr.,** personnel manager at Pacific Mills in Lyman, S. C. Elected to fill vacancies on the board of directors of the organization were: **George McClenaghan** of J. P. Stevens & Co., Inc., Greenville, S. C.; and **B. M. Cushman** of Amerotron in Anderson, S. C.

New committee chairmen of the Warp Knit Manufacturers Group of the National Federation of Textiles are: **George Hein** of Celanese Corp. of America for public relations, and **George A. Tunick** of Bangor Mills, Inc., for membership.

Recently named to the position of manager of Mooresville Mills, a division of Burlington Industries, Inc., was **W. Basil Hill,** who had been vice-president of product development and a director of Mooresville since January 1. New superintendent of manufacturing is **Berry Bland, Jr.,** who came from the Cramerton Division of Burlington. After eighteen years of service with Mooresville, **Hayden C. Cobb, Jr.** has resigned as vice-president and a director.

Giles E. Hopkins has been appointed research director of the Rayon and Acetate Fiber Producers Group and will make his headquarters at the office of the group at 350 Fifth Avenue, New York, N. Y. Mr. Hopkins was formerly technical director of the Wool Bureau, Inc. According to the announcement of this appointment, the research program of the producers will deal with the processing, handling, and use of yarns and fibers after delivery from the producers' plants and with the end-use qualities of the products made from them.

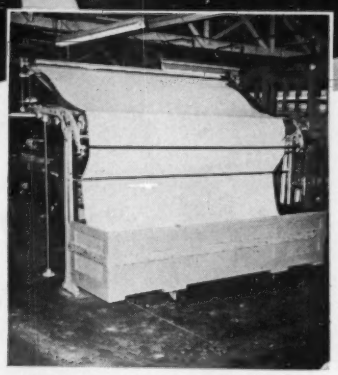
Succeeding Otis D. Covell as comptroller for Sidney Blumenthal & Co., Inc., New York, N. Y., is **Everett**



New

HIGH-SPEED,

Doubling, Measuring and Rolling Machine



ALSO AVAILABLE is an attachment (Automatic Guider for Self Doubling, Model S.D. IV) which aligns selvages automatically.

added to REINER'S EXPANDING LINE

It is with pride that Reiner offers this efficient, economical producer—ideally suited for both woven or knitted cloth. Available in various widths up to 120" for open goods (finished goods are doubled and rolled to 60" width). Larger widths can be furnished upon request.

SPECIAL FEATURES:

- 3-Speed drive permits large range of speeds for adaptability to various fabrics.
- Goods can be handled from either folded condition, loose scray or from rolls.
- Machine gives unmatched performance and accuracy even at highest speeds.
- No experienced help required for operation of unit.
- Machine prints yardage after each run—insuring accuracy, and eliminating chance for error.

Write for complete details and interesting case history regarding actual mill use of this machine.

THE REINER LINE:

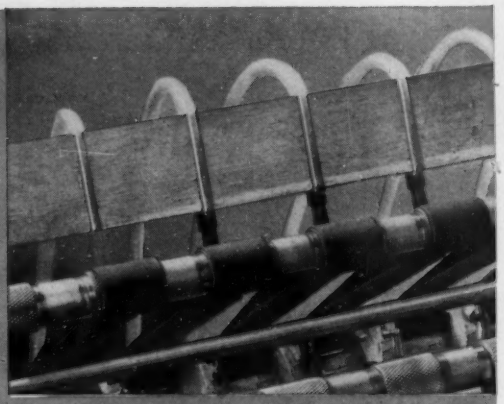
Tricot Machines—Simplex (Double Knit) Machines—Raschel Machines—Tulle Machines—All types of Warpers, Beamers and Creels—75 Gauge (4 section) Full-Fashioned Hosiery Machines—Full-Fashioned Sweater Machines—Schaffhouse Flat Power Knitting Machines—Automatic Schiffli Embroidery Machines (10 and 15 yds.)—Multi-head Automatic Embroidery Machines—Bobbin Winding Machines (for Stitching or Quilting)—Famatex Tenters—Rabo Pleating Machines—Gauged Doubling, Measuring and Rolling Machines—Ready Spare Parts Service for all Reiner Machines.

ROBERT REINER INCORPORATED

10 MINUTES FROM TIMES SQUARE

Take Bus Nos. 61 or 67, from Platform No. 60, Port Authority Bus Terminal, 41st Street and 8th Avenue, New York City. Get off at Pleasant Avenue, Weehawken, New Jersey. From there turn left and walk through the underpass up to Gregory Avenue . . . TELEPHONE: UNION 7-0502, 0503, 0504, and 0505. From New York City call LONGACRE 4-6882.

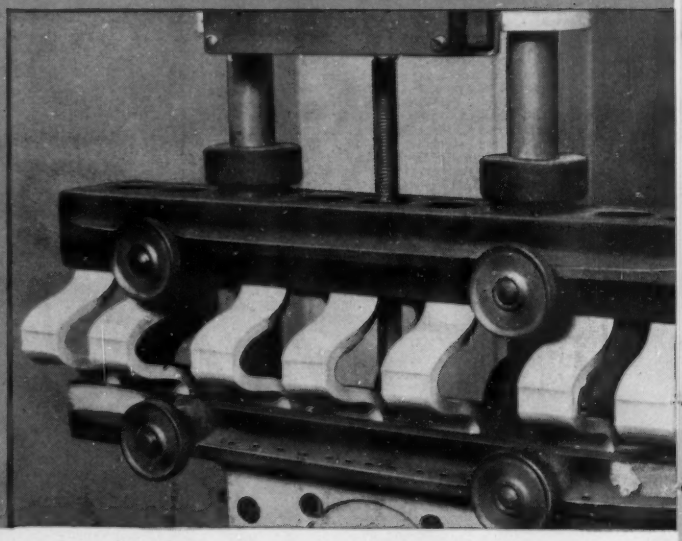
FOUNDED IN 1903 — 550-564 GREGORY AVENUE, WEEHAWKEN, NEW JERSEY



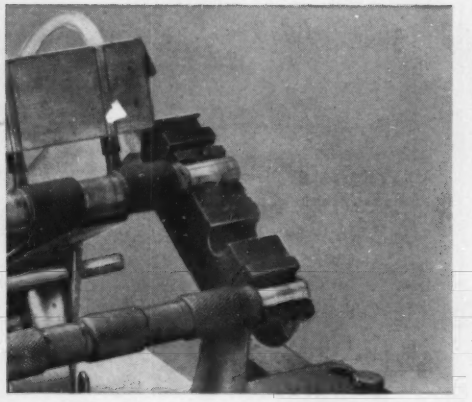
Tests like these

spin strong,

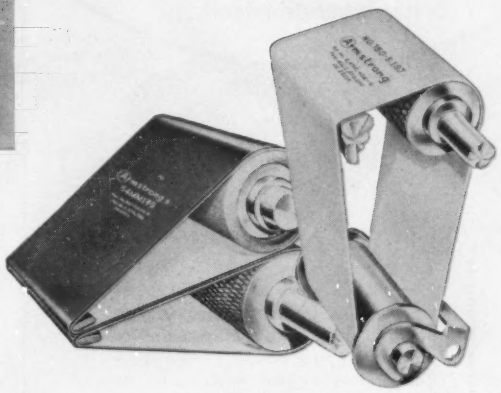
This infrared recording photo spectrometer is a laboratory "detective" used by Armstrong research men in the development and study of rubber compounds used in Accotex Aprons and other textile products. Using infrared light, the instrument analyzes and records the composition of rubber compounds under test.



Long Flex-Life is a **must** in Accotex Aprons. To test their ability to withstand flexing stress, apron compounds are checked on this device, which stretches and relaxes the apron compound hundreds of times a minute. Only compounds with best flex characteristics are released for production.



Increased production of ozone in mills can damage synthetic rubber aprons. To make sure Accotex Aprons have maximum resistance to ozone cracking, sample aprons are tested on this special frame. Air is forced over moving aprons to see which develop cracks, which do not.



insure Accotex Apron quality, help you

even yarn on high-draft frames

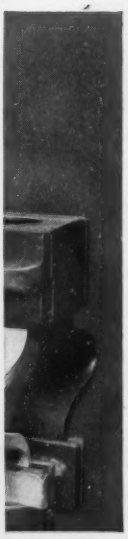
On today's high-draft equipment, Armstrong Accotex® Aprons can make an important difference in yarn quality. One big reason for this is the high quality of rubber compounds used in these aprons, and the care taken to design these compounds to meet the varying requirements of different systems. For example:

To meet double-apron spinning requirements, the Accotex NO-7075 Apron is made with different synthetic rubber compounds on its inner and outer surfaces. The compound on the outer surface is compounded to drive the top apron without slipping and maintain good yarn control.

The Accotex NO-750 Apron is engineered to give the smooth drafting action so important on single-apron systems. To get this performance, a special, super-flexible, satin-smooth compound is required.

Each of the synthetic rubber compounds used in these aprons is checked and double checked **before** production. And every step in the making of these aprons—from mixing the rubber to final packaging—is guarded by a network of quality controls. The tests shown here are just a few of the methods used to make sure that Accotex Aprons always give top performance.

If you're using high-draft equipment, get your Armstrong man to set up a test frame of Accotex Aprons. Then you'll *see* what so many mills have proved by experience: that these aprons run better, wear longer, improve yarn quality.



Send for the booklet, "Armstrong Textile Roll Coverings and Mill Supplies." Write Armstrong Cork Company, Industrial Division, 6407 Ivy Street, Lancaster, Pennsylvania.

Armstrong ACCOTEX APRONS

. . . used wherever performance counts

NEW...Sales-winning TEXTILE PACKAGING

for better protection, better economy, better buyer-acceptance...

EASY AUTOMATIC OPERATION

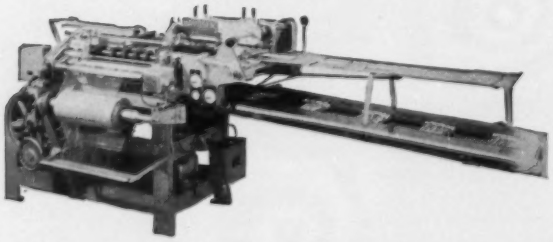
Regardless of size or shape, you get a neat, tight, perfect-register wrap on every package with a Hayssen automatic wrapping machine. Also, production men report savings up to 80% over previous wrapping costs.

FASTER, SIMPLE TO CHANGE SIZE

No complicated adjustments from size-to-size on a Hayssen. No gears or sprockets to remove or change... no need for expensive mechanics to change size, either. So simple the operator does it on the job.

COSTS LESS, DURABLY BUILT

Hayssen's simple, rugged design, using fewer moving parts, keeps these machines working and saving through years of dependable, trouble-free service. Both the cost of the machine and the maintenance are so low you won't believe it.



Let our Packaging Engineers help you with your packaging problems... WRITE US TODAY for further details.

Hayssen MFG. COMPANY

Since 1910, Manufacturers exclusively of automatic wrapping and packaging machines.

Dept. TI-7, SHEBOYGAN, WISCONSIN

Atlanta • Boston • Chicago • Dallas • Denver • Detroit • Los Angeles • Minneapolis
New York • Philadelphia • St. Louis • San Francisco • Seattle • Montreal • Toronto

Personal NOTES ABOUT MEN YOU KNOW

L. Hull who was formerly with the M. T. Stevens & Sons Co., a division of J. P. Stevens & Co., Inc.

New overseer of carding at Jefferson Mills, Jefferson, Ga., is **Robert R. Hunt,** who came from Riegel Textile Corp.'s plant in Ware Shoals, S. C.

New chairman of the South Carolina division of the Southern Textile Association is **Joe M. Jenkins,** superintendent of the Upper Plant of Kendall Cotton Mills, Pelzer, S. C. Vice-chairman is **L. A. Crawford,** assistant superintendent of Joanna (S. C.) Cotton Mills Co.

Charlie B. Jennings has resigned from Pequot Mills to take a position with the California State Prison Commission in charge of preparation in their new plant at San Quentin.

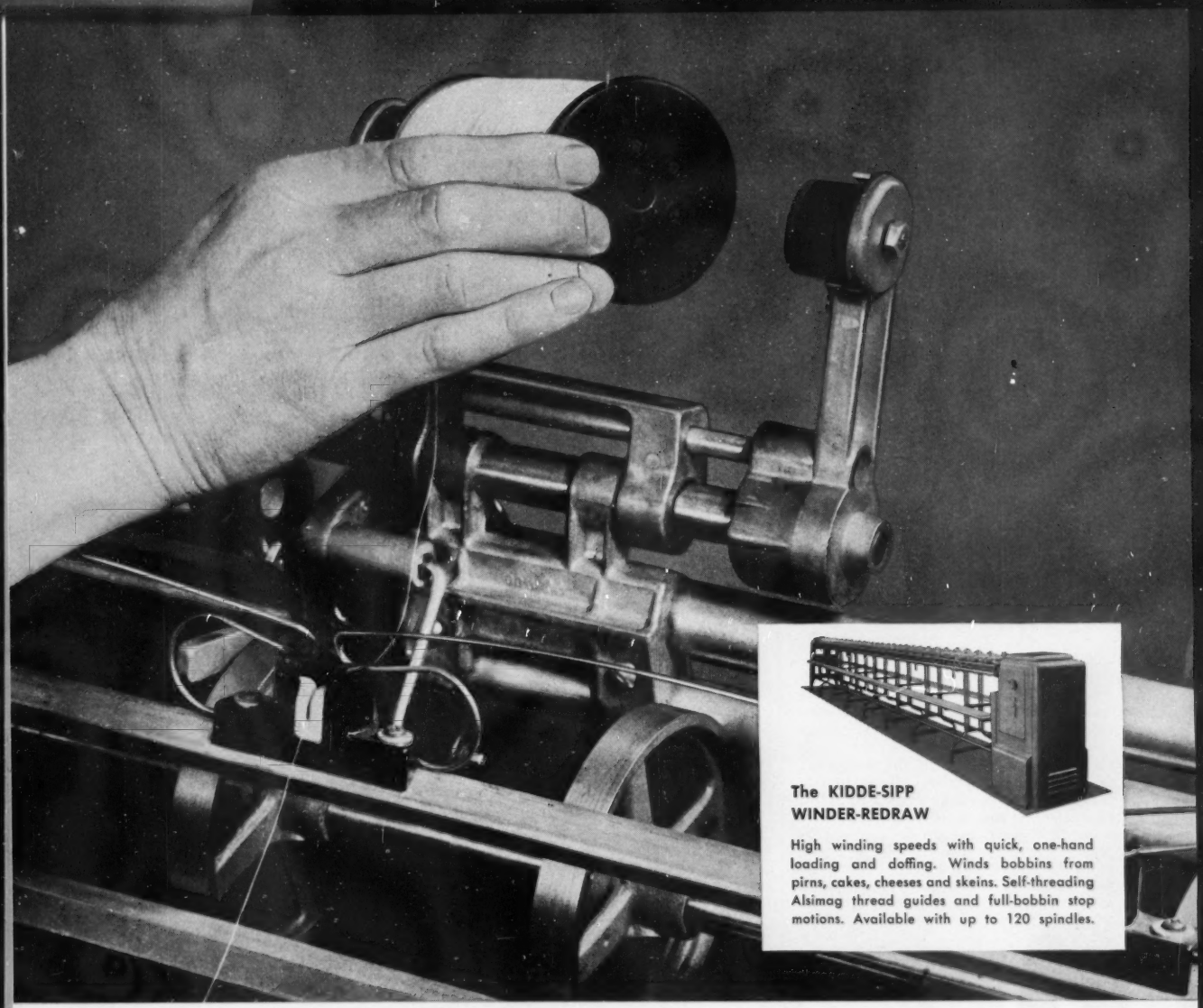
Paul W. Kase recently resigned as vice-president and general manager of Printed Fabrics Corp. of Carrollton, Ga., and was succeeded by **C. H. Lumpkin.** Technical assistant to Mr. Lumpkin is **John Hennessey,** formerly with the print works division of Joseph Bancroft and Sons of Eddystone, Pa.

A. Carl Lee has been appointed assistant to **Sidney Bluhm,** cotton buyer for Cone Mills Corp. He was formerly supervisor of cotton purchasing at Cone Mills' Dwight Division, Gadsden, Ala., and continues in complete charge of those operations. * * * Recently promoted from the position of assistant purchasing agent of Cone Mills to purchasing agent was **Edward L. Chambers** who has been with the corporation for 22 years.

P. E. Malo is now superintendent of the Mount Royal Branch of Dominion Textile Co., Ltd., succeeding **Raymond Charlebois** who is now located at the company's Sherbrooke plant.

Mohawk Carpet Mills, Inc., Amsterdam, N. Y., has announced the election of **Rex R. Maltbie** as secretary and assistant treasurer of the company. He replaces **Harold D. Burbank** who has resigned. Mr. Maltbie had been controller for subsidiaries since he came to Mohawk four years ago.

Vincent Martinek, formerly second hand of carding at the Webster (Mass.) Mills of American Woolen



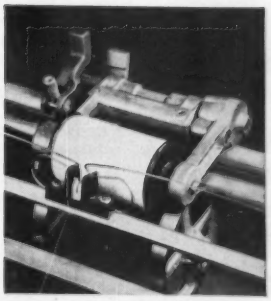
The KIDDE-SIPP WINDER-REDRAW

High winding speeds with quick, one-hand loading and doffing. Winds bobbins from pirns, cakes, cheeses and skeins. Self-threading Alsimag thread guides and full-bobbin stop motions. Available with up to 120 spindles.

One hand does it... without touching the yarn!

The high running speed of a KIDDE-Sipp winder-redraw machine is only one of the reasons why it's a top producer of even, smooth bobbins. As you can see, the operator can doff a full bobbin in a split-second... with a flip of the hand. And her fingers never even touch the yarn!

Equally important, this winder has self-threading guides and is equipped with full-spool stop motions. These advantages, combined with one-hand loading and one-hand doffing add up to this . . . with the KIDDE-Sipp winder one operator can tend more spindles and turn out more bobbins than with other machines. Write us today for complete information.



No oil spots on the yarn! Spool driving heads and friction wheels have oil-sealed bearings. Traverse rods operate on nylon rollers . . . no lubrication is required.

TRICOT AND RASCHEL MACHINES • TRICOT WARPERS • HORIZONTAL WARPERS
BEAMERS • CREELS • SLASHERS • WINDER-REDRAWS • TENSOMETERS

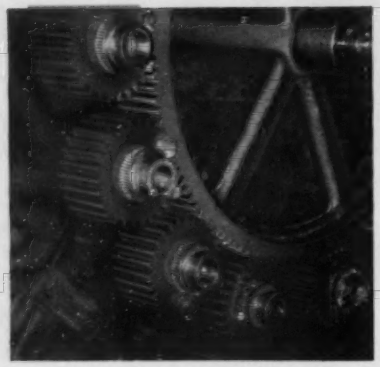
Kidde

MANUFACTURING CO., INC. — 42 FARRAND STREET — BLOOMFIELD, NEW JERSEY

The word KIDDE is the trademark of Walter Kidde & Company, Inc., and its affiliated companies.

... From SPARTANBURG, S. C.

CDF TEXTILE NEWS



CELORON GEARS

. . . reduce wear on larger, more expensive gear in this textile printing machine. Prior to the use of Celoron, metal gears had to be replaced after one to two months' operations. But, since installing nine Celoron Gears over a year ago, there has been no wear on the main gear, no replacement of the Celoron Gears. C-D-F Celoron has high impact strength, excellent resistance to heat, oil, and water. For gears that are silent in operation . . . with uniform strength in every tooth . . . get C-D-F Celoron. *Ask your gear cutter for Celoron . . . always in stock at C-D-F Spartanburg, S. C.!*

CELORON POT-EYE

Here's a low-cost molded product made from C-D-F Celoron. This pot-eye is extremely smooth and strong . . . resists wear, never corrodes. Has excellent resistance to high heat and moisture. Thousands of similar, low-cost parts can be produced by C-D-F . . . who has the know-how, the equipment to mold and machine plastics for any use.

Write now for C-D-F Celoron catalog with specifications and horsepower ratings.

ALL PRODUCTS OF

Continental-Diamond Fibre

NEWARK 11, DELAWARE

. . . with Textile Headquarters at 834 Hayne Street, Spartanburg, South Carolina.

Call Spartanburg 3-6397 for DILECTO and DIAMOND FIBRE materials handling equipment . . . trucks, boxes . . . loom parts . . . top-speed shipments of CELORON silent gear blanks . . . friendly service from your C-D-F sales engineer.

Personal NOTES ABOUT MEN YOU KNOW

Co., is now overseer of carding at Worcester (Mass.) Woolen Mills.

The National Council, Boy Scouts of America, has named **E. W. Medbery,** vice-president of Fieldcrest Mills, Inc., Spray, N. C., a member representing the Cherokee Council, which covers four counties in North Carolina.

Charlie R. Moore, formerly night superintendent at The Smitherman Cotton Mills in Troy, N. C., has been named night superintendent at Borden Mfg. Co., Goldsboro, N. C.

Two executives, **William V. Oothout,** general manager, and **Edward S. Rudnick,** director of research, have recently resigned from Wamsutta Mills, New Bedford, Mass.

At the 54th annual meeting of the Alabama Cotton Manufacturers Association held recently in Biloxi, Miss., **Fred F. Phillips,** president of Buck Creek Cotton Mills, Siluria, Ala., was elected president of the Association. Outgoing president **T. Holmes Floyd,** vice-president of Opelika Manufacturing Corp., Opelika, Ala., was made chairman of the board. New vice-president is **R. C. Moyer,** manager of Linen Thread Co., Inc., Blue Mountain, Ala.; **Fred Lyons,** president of Opp and Micolas Cotton Mills, succeeds Mr. Moyer as treasurer.

This year's winner of the Benjamin Dewitt Riegel scholarship, which is awarded annually to the son or daughter of one of the employees of the Greenville, Ala., Ware Shoals, S. C., or Trion, Ga., plants of the Riegel Textile Corp., was **Carl Pierce** of Greenville, Ala.

William E. Reid, president of Riegel Textile Corp., and **German H. H. Emory,** vice chairman of the board, have been elected director and vice chairman of the board respectively of Riegel Paper Corp.

Clayton Richardson, formerly with Lebanon (N. H.) Woolen Mills, is now overseer of spinning at Seneca Knitting Mills, Seneca Falls, N. Y.

Alan M. Richter has been appointed director of public relations at the Philadelphia Textile Institute Foundation, replacing Stuart H. Carroll.

Lester D. Sayers has resigned as superintendent of the Dunson Division of Pepperell Mfg. Co., LaGrange, Ga., to accept the position of general superintendent of Opp and Micolas Cotton Mills, Opp, Ala. Succeeding him as superintendent at Pepperell is **Richard W. Wolfe,** promoted from technical superintendent.

Recently elected as officers of the Denim Council, which is currently conducting a national campaign for the promotion of sales of garments and other merchandise made from blue denim, are: Chairman, **Robert C. Shaw** of Cone Mills, Inc.; vice-chairman, **William Hill** of Pepperell Manufacturing Co., Inc.; and secretary-treasurer, **John Severance** of the Association of Cotton Textile Merchants of New York.

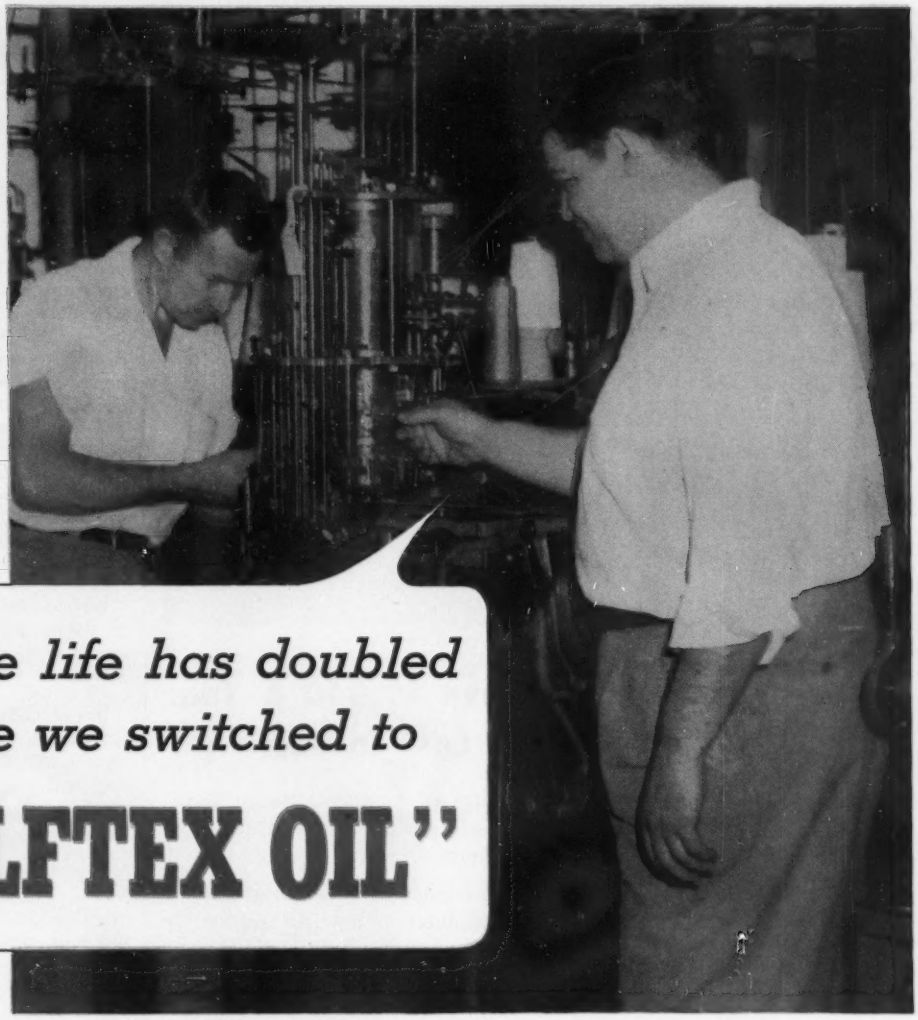
Recently promoted to overseer of the spinning room at the Ware Shoals, S. C., Division of Riegel Textile Corp. was **Allen J. Simpson,** previously night overseer at the company's Fork Shoals, S. C., mill. **William L. Winecoff** has replaced Mr. Simpson at Fork Shoals, having been promoted from second hand at Ware Shoals.

A newly created post, manager of the technical service of the non-woven fabrics division of Chicopee Manufacturing Corp., New Brunswick, N. J., has been filled by **Dr. J. K. Sumner,** who joined the corporation in 1946 as assistant technical director of the non-woven fabrics research laboratory at Milltown, N. J. Headquarters for Dr. Sumner are in Milltown.

Retirement of **Richard C. Stidston,** a vice-president and director of Limerick Yarn Mills, Manchester, N. H., since 1935, has been announced. Mr. Stidston will continue to serve as a director and consultant.

Burlington Hosiery Co. recently elected four vice-presidents: **Thomas Tolar,** vice-president in charge of all manufacturing operations; **Howard Kaiser** is vice-president and director of sales; **G. E. Low** is vice-president in charge of ladies' unbranded hosiery sales; and **William Sirota** is vice-president in charge of the men's and children's division. Headquarters of all of the officers, with the exception of Mr. Tolar, are in New York City. Mr. Tolar's office is in Greensboro, N. C.

Robert J. Tucker, Jr., has been promoted from assistant superintendent to special assistant to the president of



"Needle life has doubled since we switched to GULFTEX OIL"

says Mr. Glenn Powers, Superintendent
Continental Hosiery Company, Henderson, North Carolina

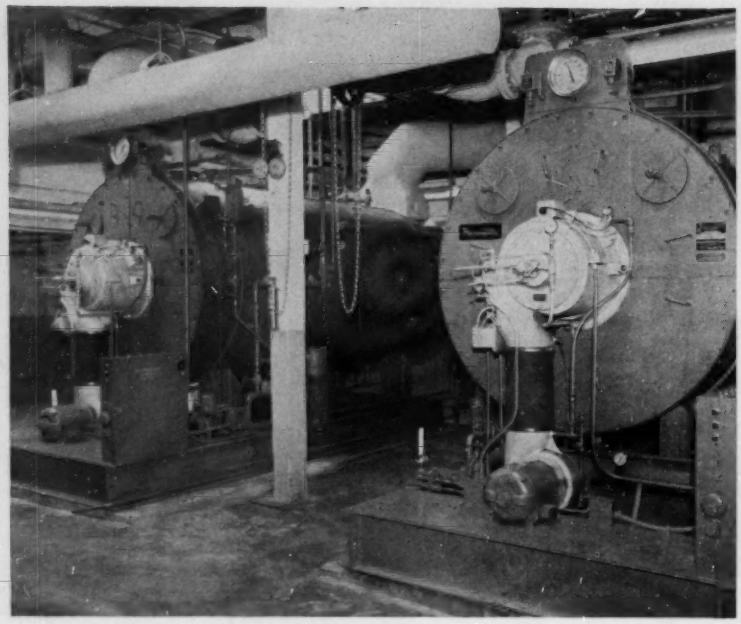
"Not only has needle life been doubled in our knitting machines since we switched to Gulftex Oil in 1953," says Mr. Powers, "but we have also eliminated rust through the use of this excellent oil. Latch needles are much cleaner, sliders are freer, and the machinery lubricated with Gulftex runs noticeably quieter and smoother."

In addition to these many fine qualities, Gulftex Oil has superior non-staining characteristics which make it the ideal lubricant for any application where the staining of fabrics is a problem.

Call in a Gulf Sales Engineer today and have him demonstrate the advantages of Gulftex Oil in your mill. You can contact him at your nearest Gulf Office. Gulf Oil Corporation · Gulf Refining Company, 1822 Gulf Building, Pittsburgh 30, Pa.

THE FINEST PETROLEUM PRODUCTS FOR ALL YOUR NEEDS

GULF



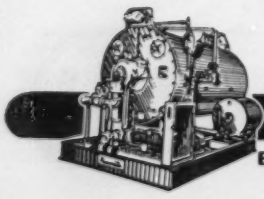
Powermasters Save $9,040 A Year By Cutting Steam Cost In Half

● These two 200 HP *Powermaster* Packaged Automatic Boilers are saving 50% of steam costs annually for a large clothing manufacturer, while providing hotter, drier steam for processing and heating.

Completely factory-assembled and fire-tested *Powermasters* have world-wide acceptance as dependable producers of low-cost steam or hot water. Now, you can get the cost-saving advantages of *Powermasters* in your plant or building on the O&S Pay-as-You-SAVE Purchase Plan that lets you pay for your new boiler out of its own savings. Here is why steam costs go down when *Powermasters* go in:

- ★ Low-cost, space-saving installation
- ★ Instant response to load changes
- ★ Quick fuel change-overs
- ★ Clean, dry steam
- ★ Fully automatic operating and safety controls
- ★ High fuel economy at all loads
- ★ Clean, quiet operation
- ★ Smokeless combustion
- ★ One source responsibility for complete unit
- ★ Nation-wide factory-trained representatives
- ★ Pay-as-You-SAVE Purchase Plan

Write for Bulletin 1220 and have a representative explain why it pays to modernize with *Powermaster*.



Powermaster®
PACKAGED AUTOMATIC BOILERS
In sizes to 500 HP; pressures to 250 psi.
ORR & SEMBOWER, INC.
Established 1885 • Morgantown Road, Reading, Pa.

Personal NOTES ABOUT MEN YOU KNOW

Roanoke Mills Co., Roanoke Rapids, N. C.

Operating executives have been named for Mount Hope Finishing Co.'s new plant at Henderson, N. C. **Roy Stead,** superintendent of finishing at the Butner, N. C., plant, is resident manager, having been replaced by **Keith Thurman,** a member of the staff at Butner. Mr. Stead's assistant is **John R. Higgins,** formerly of the Textile Division of United States Rubber Co. Mr. Higgins also serves as director of customer relations. Directing the operations of both plants is **George Staples,** vice-president.

Burnet Valentine has resigned as president and a director of A. D. Juilliard & Co., division of United Merchants and Manufacturers.

Bryan Gibson has been promoted to personnel manager of American Thread Co., Clover, S. C., succeeding **Arthur J. Weber,** who has resigned to accept a position with Kingston Mills, Inc., Cartersville, Ga.

New assistant superintendent of cotton manufacturing at Firestone Textiles, Gastonia, N. C., is **Philip R. Williams,** who was formerly associated with J. P. Stevens & Co. in Greer, S. C.

Cannon Mills Co., Kannapolis, N. C., has promoted **Fred L. Wilson** to general superintendent, succeeding **Marshall M. Payne,** resigned.

Succeeding the late C. S. Rader as a director of Standard Knitting Mills, Knoxville, Tenn., is **J. B. Woolsey,** secretary and treasurer.

Recent personnel changes at Catalina, Inc., Los Angeles, Calif., include the following: promotion of **John E. Watte, Jr.,** from vice-president in charge of production to general manager; promotion of **Richard Figueroa,** women's and children's swimwear division manager, to vice-president; and appointment of **Robert Beck** as assistant vice-president in charge of men's and boys' swimwear and director of design, a new post; designation of assistant vice-president **William Frazier** as general sales manager.

Public relations director of Berk-

MONSANTO TEXTILE TALK

RESLOOM* gives fabrics a beauty treatment that doesn't wash out!

DRESS: "EVERGLAZE" COTTON BY SPORTWHIRL

HAND AND APPEARANCE ARE PERMANENTLY IMPROVED WITH MONSANTO'S MELAMINE RESINS

More and more mills are turning to Resloom to finish cottons and wools, pure synthetics and blends.

Resloom-treated fabrics have superior hand, improved tailoring properties, quality feel and appearance. But even more important, they retain their freshness and newness after countless washings or dry cleanings.

That's because Resloom HP and M-75 are *melamine* resins, specially formulated by Monsanto for maximum durability. They do not coat the fabric. They are deposited inside absorbent fibers and within the weave of fabrics made of synthetics. They remain there for the life of the fabric.

Only small amounts of Resloom are required. Melamine is less affected by laundering and cleaning than any thermosetting resin. It has remarkable water-, alkali- and solvent-resistance.

Though extra hard, Resloom resins do not create a harsh hand when the fabric is properly impregnated. They can create a wide variety of handling characteristics from soft and full to firm and crisp.

Treatment with Resloom develops excellent crush resistance, dependable shrinkage control and novel surface textures. A Monsanto representative will be glad to work with you on technical problems relating to special finishes. Write Monsanto Chemical Company, Plastics Division, Dept. TI-7, Springfield 2, Mass.

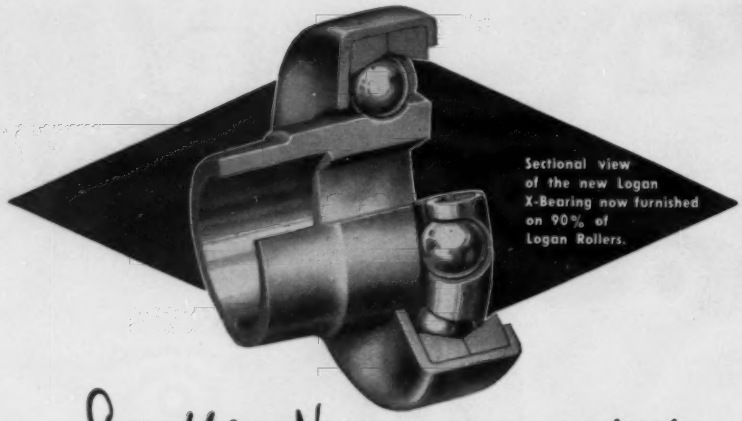
*RESLOOM: REG. U. S. PAT. OFF.

It pays to finish fabrics with durable

RESLOOM *MELAMINE RESINS*

MONSANTO

Serving industry ... which serves mankind



Something New has been added

at no increase in price...

It costs no more to get conveyors equipped with the Logan X-Bearing . . . the new low friction, extra quiet bearing, with semi-precision construction. Also, this bearing is interchangeable with old style bearings and will be furnished on replacement orders. Logan is now standardizing on this high efficiency construction. Note: Less grade is required on gravity lines and the manual effort required has been correspondingly reduced on level push lines. Ideal results also obtained on belt and live roller conveyors through the use of X-Bearings. Write for Folder X-1.

Write for your copy of Folder X-1

LOGAN CO., 206 CABEL ST.
LOUISVILLE 6, KY.

Logan Conveyors now standardizing on the new X-BEARING

Personal NOTES ABOUT MEN YOU KNOW

shire Knitting Mills, Reading, Pa., is **Richard C. Wentzel,** who was formerly a member of Berkshire's personnel relations department.

Obituaries

N. A. Johnson, 46, head of West Point Manufacturing Co.'s converting department.

David N. Taft, 78, retired woolen manufacturer, founder and owner of David N. Taft Manufacturing Co., Oxford, Mass.

Charles Seidman, owner of the former Charles Seidman & Co., Philadelphia, Pa.

Edward A. Stein, former vice-president of the dissolved Columbia Knitting Co., Milwaukee, Wis.

Rudolph C. Singer, secretary of the Bamberger-Reinthal Co.

Irving Levy, 63, veteran ribbon manufacturer and chairman of the board of Century Ribbon Mills, Inc.

Julius B. Cronheim, 70, vice-president of Fulton Bag & Cotton Mills, Atlanta, Ga.

Edwin W. McGowan, 60, vice-president of Wyandotte Worsted Co., Waterville, Me.

George M. Miller, 67, board chairman of Turner Halsey Co.

Claude D. Morris, 60, vice-president and general manager of Palmetto (Ga.) Cotton Mills, Inc.

J. J. Embry, 62, overseer of carding, Scottdale (Ga.) Mills.

W. T. Kennedy, manager Finishing Division, Pepperell (Ala.) Mfg. Co.

Samuel E. Elmore, 72, founder and president of the Elmore Corp., Spindale, N. C.

Edgar Stewart, president of the Catalina Division of Julius Kayser & Co.

Albert Leer, superintendent and one of the organizers of Buffalo Woven Label Works, Inc., in Pennsburg, Pa.

William H. Carter, 90, president of the William Carter Co., Needham Heights, Mass.

THE BOX SETS THE STAGE...

Gaylord Boxes

. . . when you raise the curtain on a new product. A modern container dramatizes the features of your product. Yet, the cost of a fresh design for your box is just a small fraction of what you spend on product development.

Strikingly handsome printed effects are now made possible by Gaylord's newly-developed "Oyster White" boxboard. For samples and complete information, call your nearby Gaylord office.

CORRUGATED AND SOLID FIBRE BOXES • FOLDING CARTONS • KRAFT PAPER AND SPECIALTIES • KRAFT BAGS AND SACKS

GAYLORD CONTAINER CORPORATION ★ ST. LOUIS

SALES OFFICES FROM COAST TO COAST ★ CONSULT YOUR LOCAL PHONE BOOK

6 TIMES A YEAR is only buffing needed for this Tennantized weave room floor.

3 REASONS WHY YOU CAN NOW

Save 30% to 60% in Floor Maintenance Costs

Important NEW improvements in the TENNANT System now make it possible—a saving of 30% to 60% in floor care costs annually, compared to 5 years ago. Here's why, as reported by many mills:

1. You use 50% less manhours today in cleaning a TENNANT-treated floor because its dirt-resistance has been almost tripled. You buff only 1/5 to 1/10 as often . . . need only a dry mop for daily cleaning.

2. Floor seals last 4 times longer today because they are more wear-resistant, stand up better under oil, grit and dirt. Bright, lustrous finish is easily renewed without need for sanding.

3. You save time in problem areas, like weave rooms, with new TENNANT materials that resist humidity, starch, discoloration, etc. Saves manhours (see photo above). *Write today for details; ask for estimate of savings possible in your mill.*

TENNANT
ESTABLISHED 1870

G. H. TENNANT CO.
2524 N. 2nd Street,
Minneapolis 11, Minn.

FLOOR MAINTENANCE SYSTEM

What the TEXTILE MILLS are doing

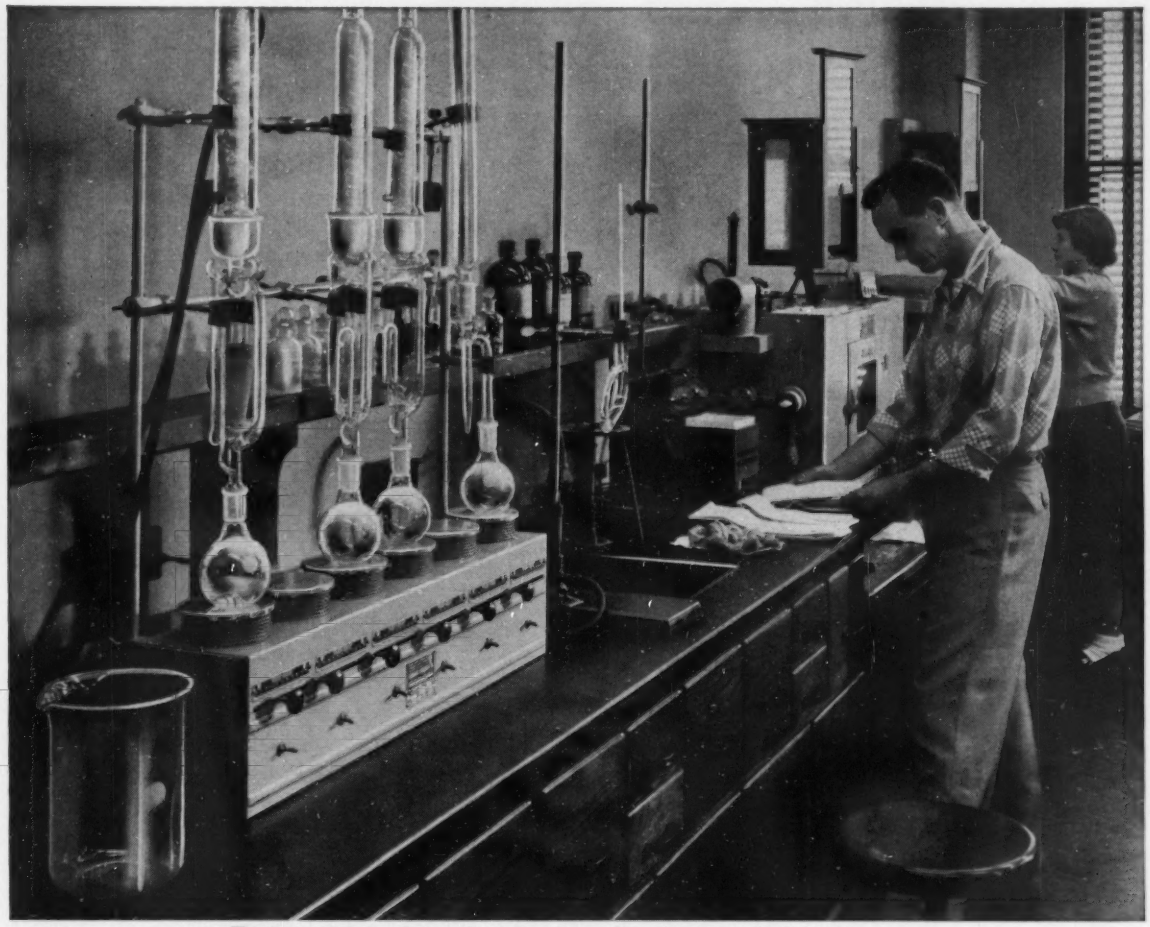
Construction of a 110,000 sq ft addition to its present plant has been started by **American Dyeing Corp.** of Rockville, Conn. Upon its completion, the dyeing, printing, and finishing capacities will be doubled. Rayon and synthetics fabrics, including blends of synthetics with cotton, will be processed there. Operation is scheduled for late this year or early next year. Laboratory and testing facilities will also be enlarged.

New heat resistant rubber thread is being utilized at **Barnhardt Elastic Corp.,** Charlotte, N. C., in the manufacture of woven insert elastic which is used primarily in sportswear. According to the announcement, longer flexibility life and ability to withstand home and commercial drying units better are benefits derived from the use of this new thread.

Manufacture of women's and junior figure nylon tricot lingerie is in the process of being discontinued by the **William Carter Co.,** Needham Heights, Mass. According to Lyndall F. Carter, first vice-president of the company, "The nylon tricot lines account for only about ten per cent of the company's business. Since our tricot operation demands a disproportionately large share of time, energy, and capital, we have decided to discontinue it . . . " This decision will permit concentration of the company's production on infants', children's, men's and boys' knit lines, as well as women's cotton and warm wear lingerie. * * * Boxing, warehouse, and shipping space will be increased by seventy per cent at the company's Needham Heights plant when an addition now under construction has been completed. * * * Carter's Senatobia, Miss., mill is being converted for cotton knit operations.

It was 50 years ago last April when the 272 looms then installed in the White Oak Plant of **Cone Mills Corp.** began producing denims. Today there are 2,400 looms in this mill with an average of 80 million yards of denim manufactured every year. Named for a white oak tree which was located at the starting point chosen by the surveyors who laid out the mill, the plant today employs

(Continued on page 177)



Testing yarns in Greenville laboratory, Corn Products Refining Company

An analytical step in performance tests of a sizing formula

HOW CAN THIS MODERN LABORATORY SERVE YOU?

Primarily devoted to the evaluation and perfection of starch products for warp sizing, Corn Products Refining Company's field laboratory at Greenville, South Carolina now serves multiple purposes. The laboratory is centrally located and serves the textile industry in numerous capacities. Among the projects in force in this up-to-date laboratory are these:

- **Conducting performance tests of various sizing formulas.**
- **Conducting check-tests on size content of yarn produced in a large number of textile mills.**
- **Perfecting size formulas for use under specific conditions.**

A close liaison between the laboratory and the company's field experts helps evaluate and solve mill production problems more speedily and effectively. This technical service is offered without cost or obligation to the industry. Inquiries or requests should be sent to:
Corn Products Refining Co., 17 Battery Place, N. Y. 4, N. Y.

PERFORMANCE without parallel

High Drafts

Yarn Quality

Flexibility

Economy

. . . the result of 25 years' experience with TWO-APRON DRAFTING

There's no "magic" involved in the success of the Whitin Two-Apron System. Its operation in thousands of mills has proven its value and has led to its recognition everywhere in the textile industry as the finest drafting system in the world.

In use on more than 11,000,000 spindles.

Whitin

MACHINE WORKS

Whitinsville • Massachusetts

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

Textile Industries
for July 1955

News in Brief

Weavers in Stretch Market. According to one purveyor of stretch yarn, although some trade with knitters has fallen by the wayside, weavers have caught on to the stretch business and have bolstered yarn sales. Woven stretch goods go into slips, blouses, etc. Fabric embodies regular nylon yarn as well as stretch.

Hoover Commission on Textile Products. Taxpayers could save more than $340 million of the Government's annual bill for food and clothing through unified, efficient management and tighter inventory controls, according to the Commission on Organization of the Executive Branch of the Government (Hoover Commission). Among the major recommendations of the Commission: establishment of a central agency to handle procurement, distribution, warehousing, and management of clothing supplies for the Armed Forces; improvement of financial controls over the supply of clothing for the Services; and assumption by the General Services Administration of full responsibility for procurement and distribution of common-

use items for all civilian agencies of the Government, and development of cross-servicing arrangements with the Army's QM General Market Center in this work. The Commission cited a clothing inventory of nearly $2.7 billion in the Department of Defense, and estimates that a reduction of $1.35 billion is possible in this inventory, with a saving of $30 million annually in interest charges and $3 million in warehousing and other expenses. Supplies of various clothing items in stock held by the Armed Forces range up to a 10.6 years' supply of one item, although no holdings of textile items were found to equal the Navy's famous hoard of a 60-year supply of canned hamburger.

Hungarian Shuttleless Loom. The first Hungarian shuttleless loom has been put into production at the Kistext mill, reports the Hungarian News and Information Service. The development is said to "entirely eliminate" loom noise and to increase loom efficiency by 60 per cent or more. The device can be applied to existing looms at a cost of about $210.

Textile Strikers Fined. Five former employees of a Georgia mill were given fines plus suspended jail sentences on charges of assault

Walen Concerned Over Wool Mill Liquidations

The liquidations which have taken place in the wool textile industry "should command attention in the nation's capital," E. D. Walen, vice-president of Pacific Mills, Lawrence, Mass., said recently when retiring as president of the National Association of Wool Manufacturers.

Adding that he was not "suggesting special consideration in terms of 'made' or 'directed' Government work subsidization, relocation of plants or workers or any other of the impracticable and uneconomic palliatives that from time to time have been advanced. . . ," Mr. Walen said that such attention as the "Government may direct to this industry should be objective in nature. National interest, rather than group interest, should be the criterion of judgment for all acts relating to it."

He declared that U. S. "national and international trade policies should be such, in the national interest, as to stimulate the growth and tone" of the industry. The contraction of the industry is so great that it should be a matter of concern to the armed services which require large amounts of wool textiles, Mr. Walen pointed out.

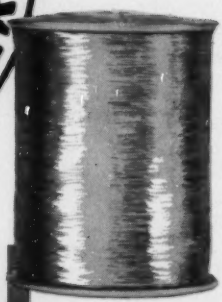
The wool mill executive said the number of broad looms had dropped from 37,000 in 1948 to an estimated 24,000 in 1954. In the same period, woolen spindles declined from 1,535,000 to an estimated 900,000, and worsted spindles were down from 1,863,000 to just over a million.

While there have been replacements of machinery and the new equipment is more efficient than the old, Mr. Walen said the change was so great that it may be "assumed our over-all capacity has been reduced."

Elimination of the duty on imported wool, he said, was among the steps the Government could take which would lead to lower prices and greater demand for wool products. This would benefit both U. S. and foreign growers as well as the mills, Mr. Walen added.

new MIRACLE in METALLICS

AMERICAN INSTITUTE OF LAUNDERING
CERTIFIED
WASHABLE



A.I.L. APPROVAL

(American Institute of Laundering)

for METLON® with MYLAR*

FIRST and **ONLY METALLIC YARN** approved by the A.I.L. for *Washing* and *Ironing* at high temperatures.

The American Institute of Laundering is the Non-Profit Research Center of the Textile-Laundry Industry. No article is ever awarded their seal until it has been tested and meets A.I.L.'s exceptionally high standards of launderability. These standards are determined by thorough research in A.I.L. laboratories by skilled technicians plus the practical experience of thousands of laundries.

Imagine! Here is a new metallic yarn so unquestionably superior that it passed every phase of this rigid testing program. These tests proved that METLON with MYLAR showed absolutely no tendency to bleed or discolor fabrics in white work, light color, wool washing formulas. Approved color fast in sunlight, gas fading, perspiration and crocking tests. Did not separate in activated washing and finishing tests. Never before in history has a metallic yarn been awarded this coveted seal for guaranteed launderability!

Let our textile engineers work with you in the development of new metallic miracles in *your* particular field. Write, wire or phone TODAY!

METLON makes everything look better

METLON CORPORATION 432 Fourth Avenue, New York 16, N. Y. MUrray Hill 3-5962

SOUTHERN REPRESENTATIVES: Will Plowden, Dave Williams, Box 37, Griffin, Ga.
Karl H. Inderfurth, P.O. Box 6161, Charlotte, N. C.

A Division of Acme Backing Corporation

®Reg. Trademark
*DuPont's Registered Trademark For its Polyester Film

and battery and misdemeanor for actions committed during a strike last year. Fines ranged from $50 to $100, with six-month suspended jail sentences.

Progress of Full-Fashioned Sweaters. While full fashioned sweater knitting has not yet made significant strides in the knitted outerwear production picture, one industry observer predicts that within the next two years about 25% of sweater production will be full-fashioned. He also predicts that the synthetics as raw materials for both cut and F-F work will remain strong, and that they are here to stay as sweater fibers. On the subject of hosiery knitters going into sweater work, the processes and fibers used, according to the same source, are parallel to F-F sweater work and it is therefore a natural diversification for the hosiery mill.

Shrinking Wool Goods With Artificial Fog. "The best moistening agent known up to now [for shrinking wool textiles] is the

natural fog of the British Isles, which has been used since remote times for this purpose with excellent results," says Leopold Squarenina, in British Patent 720,146. He describes a device for duplicating these conditions artificially by introducing warm, moisture-laden air to a refrigerated atmosphere in which the woolens to be shrunk are suspended.

Canadian Blending Study Released. The Textile Technical Federation of Canada has released the first of a series of educational studies aimed at making available to Canadian textile personnel in-

New Finish Puts Cottons in No-Iron Wash and Wear Class

Cranston Print Works Company has unveiled a new cotton finish which is said to virtually eliminate the need for ironing.

Called "Dri-Smooth," it was introduced to the trade at a fashion presentation and wash-and-wear demonstration at the Waldorf Astoria, employing both a standard home laundry washer and companion dryer to demonstrate the properties of the new finish.

Developed principally for 80 x 80 4.00 carded print cloths, the physical properties of the new finish, described as a resin chemical finish, are an improvement on those of Cranston's Fresh-Tex finish in shrinkage and crease resistance, T. W. D. Schafer, sales manager, stated.

Dri-Smooth makes a cotton dress, skirt or pajamas wearable immediately after washing and drying. Also, Dri-Smooth finished cottons dry twice as fast as the untreated fabric.

Other performance properties achieved through the new finish include shrinkage of not more than 2 per cent, the elimination of any need for starch, mildew resistance, and the creation of generally faster, easier washing.

Mr. Schafer added that laboratory tests reveal it is possible to use their new finish on a wide variety of cottons with as high a count or higher than 80 squares. He said seven or eight print numbers, both white and dyed ground prints, are currently being finished with Dri-Smooth at the Cranston, R. I.; Webster, Mass.; and Fletcher, N. C., plants.

THESE TWO DRESSES are identical except the one on the left was treated with Cranston's "Dri-Smooth" finish. Both were hand-washed, squeezed lightly, and hung on hangers to drip dry. Collar, cuffs, and hem were smoothed and patted into place by hand. Note difference after drying.

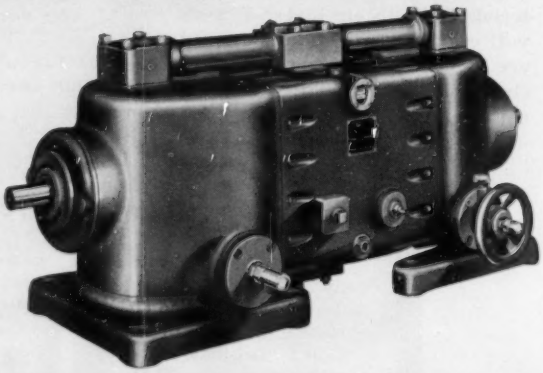
BETTER products FASTER

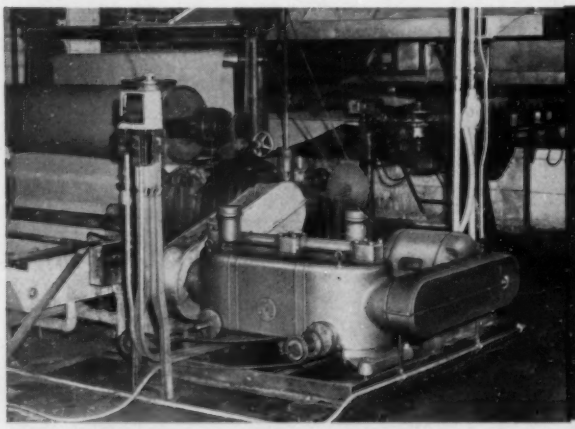
When Your Textile Machinery has

VICKER Variable Speed Hydraulic Transmissions

Extreme precision of control and phenomenally low maintenance are among the characteristics which make Vickers Hydraulic Variable Speed Drives so desirable on textile machinery. Infinitely variable and stepless running speeds, selective creep speeds, automatic overload protection, independent adjustment of acceleration and deceleration and automatic maintenance of tension, are other advantages you get with Vickers Hydraulic Equipment.

Note applications below and then ask our nearest Application Engineering Office for a copy of Textile Bulletin 54-66.





VICKERS HYDRAULIC PAD DRIVE

This machine has operated six years without maintenance except periodic oil changes. Superior speed control is obtained from dancer roll signal through chain and sprocket arrangement. Stepless speed selection is infinitely variable from zero up to maximum. Controlled acceleration and deceleration rates are positive and smooth. Variable horsepower generator characteristics keep power input down to requirements of machine under all load conditions.

VICKERS HYDRAULIC TENTERING FRAME DRIVE

Easily adjustable tension is accurately maintained automatically. Speed variation is stepless and infinite from zero to maximum while creep speeds are selective instead of fixed. With this drive the machine does better work faster with complete dependability.

VICKERS Incorporated

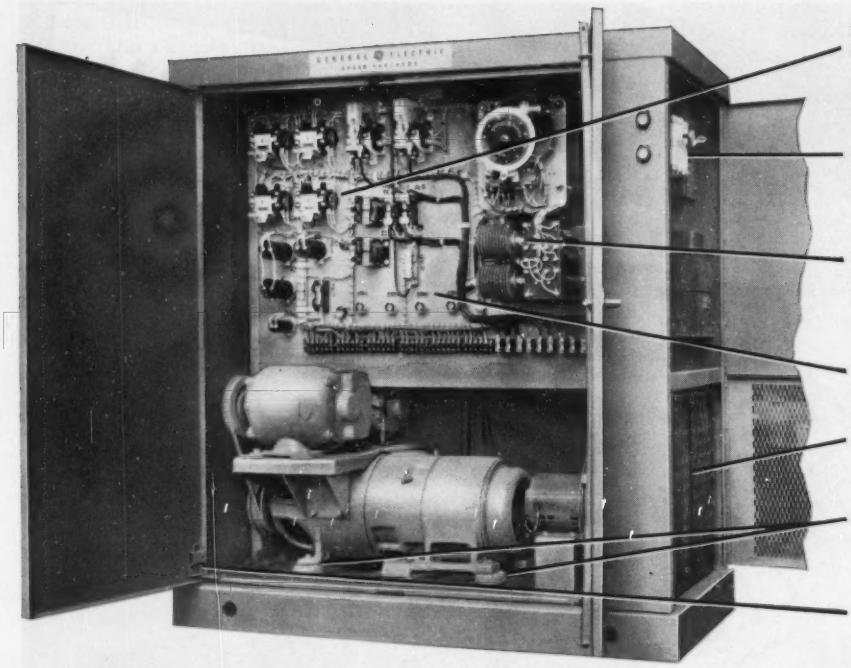
DIVISION OF SPERRY RAND CORPORATION
1554 OAKMAN BLVD.
DETROIT 32, MICH.

Application Engineering Offices: • ATLANTA CHICAGO AREA (Brookfield) • CINCINNATI CLEVELAND • DETROIT • HOUSTON • LOS ANGELES AREA (El Segundo) • MINNEAPOLIS NEW YORK AREA (Summit, N.J.) • PHILADELPHIA AREA (Media) • PITTSBURGH AREA (Mt. Lebanon) ROCHESTER • ROCKFORD • SAN FRANCISCO AREA (Berkeley) • SEATTLE • ST. LOUIS TULSA • WASHINGTON • WORCESTER

FOR FURTHER INFORMATION *Ask For* BULLETIN 54-66

7249

Engineers and Builders of Hydraulic Equipment Since 1921



STANDARD CONTROL COMPONENTS are front-connected. Replacements readily available whenever needed.

MAGNETIC STARTING CONTROL and all a-c components protected in separate compartment.

COMPACT AMPLISTAT, easily replaced stock item with no moving parts, requires no maintenance.

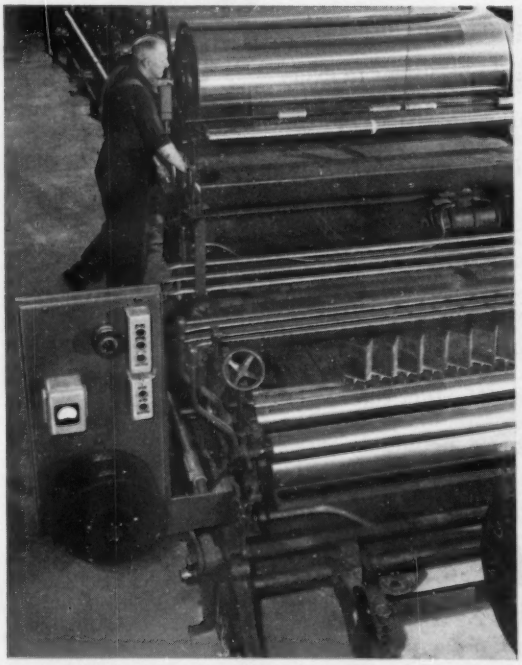
ALL DEVICES IDENTIFIED for quick recognition, easy servicing.

PRESSURIZING FAN AND AIR FILTER keep unit free from lint and dirt. Filters easily replaced.

VIBRATION DAMPERS supporting m-g set minimize vibration and reduce noise level.

HINGED, REMOVABLE DOORS for quick, easy accessibility.

NEW G-E packaged slasher drive gives you easy installation . . . less maintenance



NEW G-E SLASHER DRIVE maintains tension automatically, keeps elasticity uniform. On panel are speed and tension control rheostats, tension indicator, push-button station.

Winds up to 20% more yarn on the beam

LESS MAINTENANCE—Now, General Electric's slasher drive incorporates the amplistat, a static magnetic amplifier. With no moving parts, maintenance is cut to a minimum. To reduce downtime further, the positive-pressurized cabinet and inexpensive glass fiber filters help keep lint and dirt from power unit. Protected within case, all components are easily reached through hinged doors.

EASY TO INSTALL—Power unit comes assembled, wired and tested, and requires no special foundation. Just set unit in reasonably level position and run in conduit.

BETTER PERFORMANCE—By setting a simple dial, stepless adjustment of beaming tension can be made over a wide range to suit yarn sizes and number of ends. The G-E amplistat maintains settings automatically—makes possible up to 20% more uniformly hard-packed yarn on the beam.

Included in General Electric's new packaged slasher drive are: (1) compact, factory-assembled power unit, (2) adjustable-speed d-c drive motors and (3) operator's controls which can be mounted in most convenient locations.

FOR MORE INFORMATION—Contact your G-E Apparatus Sales Office. A specialist will show you how to get the best from your slasher operation. Direct Current Motor and Generator Department, General Electric Co., Erie, Pa.

815-5

GENERAL ELECTRIC

IN

WEST VIRGINIA

In West Virginia, manufacturers, whatever their product, have an inside line to the great centers of population. The East, the North, the South, the Midwest — West Virginia is in the heart of the millions of people living in these regions, connected with them by every form of quick, modern transportation.

To a central and strategic location can be added the versatility of West Virginia's people; its mild climate, the availability of power in every form — coal, natural gas or electricity.

West Virginia, indeed, offers a pattern to textile industries. It is the home of many of the synthetics, for here is located the chemical center of the world. Follow this pattern, for above all things West Virginia offers the chance to grow and to operate profitably.

WRITE FOR INFORMATION

YOUR BEST BET'S

WEST VIRGINIA

AMERICA'S NEW INDUSTRIAL FRONTIER!

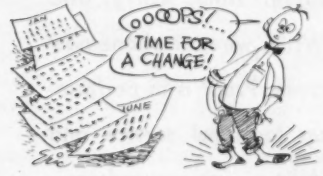
Industries whose plans include expansion or dispersion, should inquire about the State of Progress . . . West Virginia. Write or phone: Executive Director, West Virginia Industrial and Publicity Commission, State Capitol Building, Room 801, Charleston 5, West Virginia.

formation of major importance to them. The 20-page mimeographed publication is entitled "The Preparatory Processes and the Spinning of Cotton and Viscose Blends on the Cotton System," and was prepared by a committee of the Cornwall and District Textile Association, a member group of the TTFC.

ACS Moves. The New York offices of the News Service and regional editorial staff of the American Chemical Society have been moved to Room 1802, 2 Park Ave., New York 16, N. Y.

Golden Fleece Awards. The National Association of Wool Manufacturers at its recent 90th annual meeting presented Golden Fleece awards, for success in their chosen fields, to Commander Eugene P. Wilkinson, captain of the U.S.S. Nautilus; Jacqueline Cochran, first woman to fly faster than sound; William F. Talbert, captain of the Davis Cup tennis team; and Thomas E. Dewey, former governor of New York.

Men's Sock-Buying Habits. Preliminary industry survey impressions noted at the Hosiery Industry Conference reveal that men buy hosiery every six months, wear out



socks in six months, and keep an average of 19 pairs on hand. Men appraise socks by the following criteria in the order given: (1) fit, (2) wearability, (3) color fastness, (4) material, and (5) color.

The Sheet, Bedspread, and Towel Situation. A survey recently completed by *Town Journal* and *Farm Journal* has brought to light some interesting facts about recent marketing changes in the field of sheets, bedspreads, and towels. The magazines sent questionnaires to 2000 of the subscribers to each, and got returns of 18.1% and 19.6%, respectively. The findings from both magazines were essentially the same. Some of the findings: 23% of the respondents have colored sheets for double beds and 5% have colored sheets for single beds; 24% have fitted double sheets, 11% have fitted single sheets. One-third expect to buy fitted sheets as their next purchase. 24% own matching bedspreads and drapes; 28% have different bedspreads for winter and summer. Those answering the questionnaire own about 18 bath towels, 10 hand towels, 17 washcloths, and 17 dish towels per family. And the typical subscriber has 3.3 bedrooms, with 2.6 double beds and 1.5 single beds.

New York Prohibits Flammable Fabrics. Governor Harriman has signed a bill which prohibits the manufacture, sale, or transportation in New York State of highly

flammable articles of apparel. Common carriers, converters, and certain exports are exempt. Commercial Standards 191-53 and 192-53 are cited as the bases on which fabrics are to be judged. Violation of the provisions of the act is a misdemeanor, punishable by a fine of $500 and/or imprisonment for one year.

AATCC Checks on A-Bomb Effects. An AATCC observer's team attended the most recent Nevada A-bomb tests to see at first hand the effect of the blast on textile fabrics. The team was made up of

H. W. Stiegler, Charles Dorn, P. J. Fynn, and Ernest Kaswell. A detailed report will be given at the AATCC convention in September.

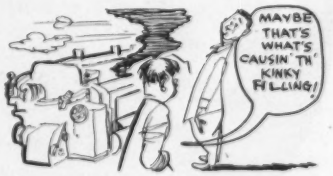
Dacron Helanca Yarn. The trademark "Helanca" has been ex-

News in Brief

tended for use with stretch Dacron as well as nylon. Each yarn can be used separately or the two can be used in combination and the garment labelled Helanca, where the manufacturer has a licensing agreement with Heberlein Patent Corp., owners of the trademark.

CCC Wool Prices Remain Unchanged. USDA has announced that present minimum selling prices for CCC-owned wool (103% of 1954 loan rates, plus sales commission) will be continued until November 1, when a new sales policy designed to move wool out of CCC stocks in an orderly manner over a period of time will be put into effect.

Another European Shuttleless Loom. A pneumatic loom in which the filling is carried through the shed by air current has been developed by Max Paabo, Estonian engineer now in Stuttgart, Western Germany. The loom, called the "Maxbo," is claimed to operate at



350 picks per minute on 35½-inch goods, with an hourly production of 13⅛ yards. Ten of the looms are said to be operating in an Israeli textile mill.

Better Parachute Materials Needed. A textile manufacturer who can come up with a parachute material to meet the demands of high-speed aviation will find a ready-made market for his product, according to the Department of Commerce. Principal problems are those incident to all supersonic flights—resistance to higher temperatures brought about by operation of the power plant, air friction, and fiber-to-fiber friction at high speeds. These problems and others are discussed in a recent

do metal impurities make TROUBLE for you?

KALEX works like magic!!!!!

★ in vat, chrome, and naphthol dyeing!

★ for producing more brilliant shades!

★ in Kier boiling!

★ in peroxide bleaching operation!

★ in mercerizing!

★ for removing iron stains!

★ and in many other processes where trouble exists!

The KALEX products are organic sequestering agents, or water-soluble ion exchangers. They have the property of binding and deionizing heavy metal and alkali earth ions, without removing them from solution.

"Get to the HART of the trouble... get KALEX!"

Save yourself time, worry, and money! Write, wire, or phone *now* for a sample. Proof is in *performance*. Top technical service and prompt delivery are assured.

HART PRODUCTS CORPORATION

1440 BROADWAY · NEW YORK 18, N. Y.

Works and Laboratories: Jersey City, N. J. Hart Products Company of Canada, Ltd., Guelph, Ontario

HART PRODUCTS — PLEDGED ON RESEARCH

REQUIRED READING FOR COST-CONSCIOUS TEXTILE MEN!

220-page Air Force publication, "Symposium on Parachute Textiles," available as PB 111563 from the Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C. Price: $5.50.

The Men's Stretch Market. Proportion of market claimed for stretch hosiery: indications are that 20% of the market was for stretch styles in 1954; 20 - 40% is expected to be for stretch hosiery in 1955, according to information revealed at the recent Hosiery Industry Conference.

Tire Trends. Tires with blue, green, and brown trim on the sidewalls are now being produced by U. S. Rubber Co. The color extends from the outer edge of the white sidewall to the top edge of the

tread. . . . Tubeless tires make up more than three-quarters of the company's current passenger tire production; one-half of the passenger tires now have white sidewalls.

Broad Woven Goods Production. Figures released by the Bureau of the Census show that broad woven goods (12 inches and wider) production in 1954 totaled 12.2 billion yards. Of this total, 80% was cotton, 14% rayon and acetate, 4% noncellulosic synthetic fibers, and the rest woolen, worsted, and silk. Percentage figures are unchanged from the previous year, except for cotton, which gained 1%, and rayon and acetate, which lost 1%.

How to Distinguish Orlon from Acrilan. To distinguish rapidly between Orlon and Acrilan: boil sample for 5 minutes in water solution of the following (based on weight of water)—0.2% Du Pont Anthraquinone Blue SWF Conc. 150% (Pr. 12), 0.5% acetic acid. Orlon is not stained by this treatment, while Acrilan is dyed to a medium blue shade. If the sample has been dyed previously, the shade of Orlon is essentially unaffected, while that of Acrilan is altered. The Acrilan shade becomes much bluer or if the original shade was blue, it becomes heavier.

FIT to Sponsor Research for Cutters. A research program on all fabric handling problems faced by the cutting-up trades will start soon under the auspices of the Fashion Institute of Technology. Fiber producers and textile mills are now being asked to contribute toward a fund of $50,000 needed to carry out the plan.

Bleaching Cotton-Nylon Blends? Cotton/nylon blends can be bleached by either (1) "Textone,"* (2) a continuous hydrogen peroxide unit, or (3) sodium hypochlorite or hydrogen peroxide in a kier, according to information contained in Preliminary Bulletin N-23 recently issued by the Textile Fibers Dept. of E. I. du Pont de Nemours & Co., Inc. Procedures for all three methods are suggested, but the company recommends that when starting to use one of the systems mills should make trial runs to be sure that the instructions are suitable for the particular conditions at the plant.

*Trademark of the Olin-Mathieson Chemical Corp.

News in Brief

MERCHANDISING NOTES

American Viscose Corp. will design and promote special rayon, acetate, and blended fabrics, to be known as "Avisco Originals." Garments made from them will be identified by a tag. . . . . The corporation has made arrangements with **Johnson & Johnson** to produce rayon staple for use as a surgical absorbent.

Carpet Institute and **National Institute of Rug Cleaning** will meet together at regular intervals to promote the highest degree of cooperation between the two organizations.

Chicopee Mills, Inc., has completed a survey which shows that 12 million new auto seat covers will be sold in 1955, an increase of 15% over last year's sales. The survey also indicates that more than 62% of 1955 purchasers will buy woven plastic seat covers. In 1954, plastics accounted for 50.6% of seat cover fabric yardage, fiber (paper) represented 39%, and rayon 10.4%.

Denim Council has started its promotion campaign with a survey of retailers who handle blue denim garments. The Council has adopted as its slogan, "Durable Denim—the Family Fabric for Work and Play."

Fab Fashions has introduced a wall covering of fiber glass combined with vinyl plastic.

Knitted Outerwear Foundation has designated September 19 to 25 as Sweater Week.

R. H. Macy & Co. plans an exhibition and sale of Japanese goods to cover an entire floor of its New York store. Macy's will send experts to Japan to assist manufacturers in designing goods that are suitable for the American market. This is another illustration of the lengths to which retailers are going to bring in the products of low-wage countries.—*National Federation of Textiles Bulletin.*

Metro-Atlantic, Inc., has introduced a hang-tag to identify garments treated with their Ranedare-S durable silicone water repellent.

Supima Association predicts that women's apparel made from American-grown extra-long staple cotton (Supima) will be introduced to the fashion market in spring and summer lines for 1956.

The Wool Bureau, Inc., has been designated by the U. S. Olympics Committee to coordinate procurement of uniforms and other clothing for the American team in the 1956 Olympics, to be held in Melbourne, Australia, and Cortina, Italy.

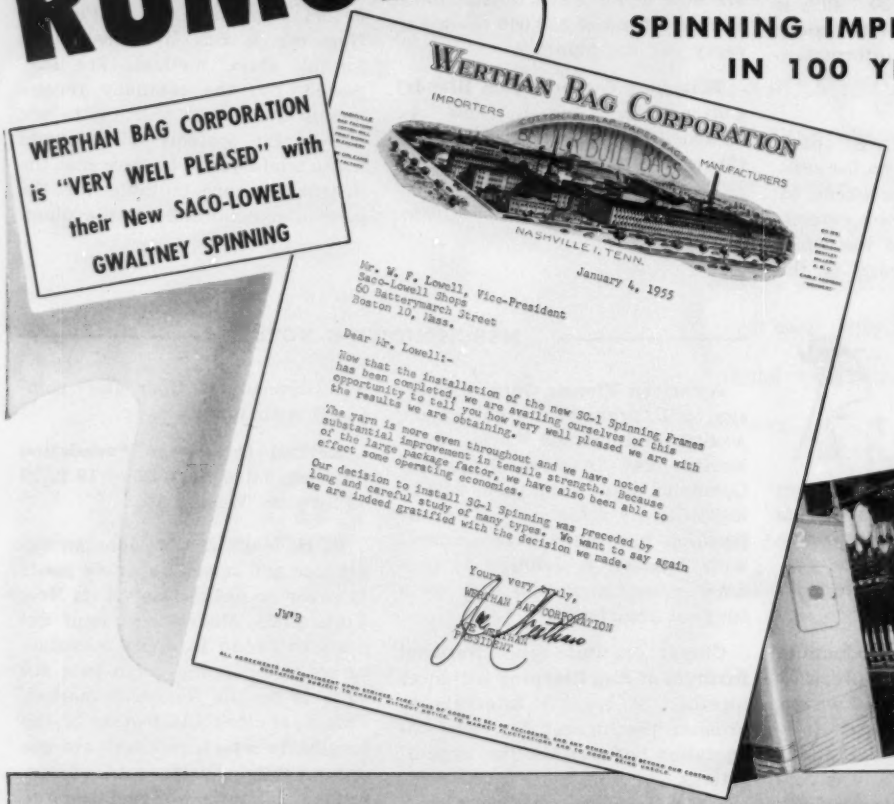
NO. 3 OF A SERIES

FACTS NOT RUMORS

about SACO-LOWELL GWALTNEY SPINNING

THE ONLY REVOLUTIONARY SPINNING IMPROVEMENT IN 100 YEARS

WERTHAN BAG CORPORATION is "VERY WELL PLEASED" with their New SACO-LOWELL GWALTNEY SPINNING



WERTHAN BAG CORPORATION

IMPORTERS — MANUFACTURERS

NASHVILLE 1, TENN.

January 4, 1955

Mr. W. F. Lowell, Vice-President
Saco-Lowell Shops
60 Batterymarch Street
Boston 10, Mass.

Dear Mr. Lowell:-

Now that the installation of the new SC-1 Spinning Frames has been completed, we are availing ourselves of this opportunity to tell you how very well pleased we are with the results we are obtaining.

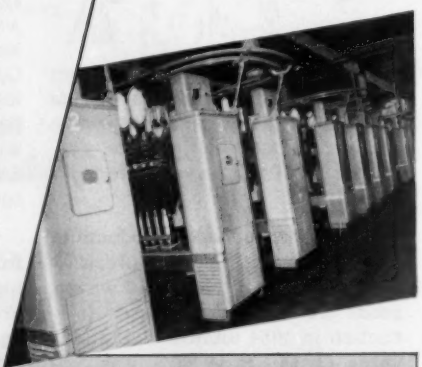
The yarn is more even throughout and we have noted a substantial improvement in tensile strength. Because of the large package factor, we have also been able to effect some operating economies.

Our decision to install SC-1 Spinning was preceded by long and careful study of many types. We want to say again we are indeed gratified with the decision we made.

Yours very truly,

WERTHAN BAG CORPORATION

JWB



THIS OPERATING INFORMATION CONTAINS THE FACTS . . .

A TYPICAL WERTHAN SPINNING ROOM ORGANIZATION

WARP

Count	Twist Multiplier	Twist per Inch	Spindle Speed	Ring Size	Traveler Speed	Front Roll Speed	Efficiency %	Net Production per Spindle per Hour
12	4.30	14.88	8600	3.00	6754	184	94	.087
16	4.75	19.00	9100	3.00	7147	152	95	.056
20	4.75	21.24	9100	3.00	7147	136	95.2	.041
24	4.75	23.27	9100	3.00	7147	124	95.4	.031
26	4.75	24.22	9100	2.75	5109	120	95.6	.028
30	4.75	26.02	9100	2.75	5109	111	97.0	.022

FILLING

Count	Twist Multiplier	Twist per Inch	Spindle Speed	Ring Size	Traveler Speed	Front Roll Speed	Efficiency %	Net Production per Spindle per Hour
10	4.00	12.65	6000	3.00	4712	151	93.5	.088
14.25	3.75	14.13	8600	3.00	6754	193	94	.079
20	3.75	16.77	8600	3.00	6754	163	94.5	.048
22	3.75	17.59	8600	3.00	6754	156	95	.042
26	3.75	19.12	8600	2.75	6754	143	95	.033
36	3.75	22.50	8600	2.75	6754	122	96	.021
6.75 Part Waste	4.00	10.39	4600	3.00	3612	141	93	.121

SACO-LOWELL

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD and SACO, MAINE, and SANFORD, N. C.

SALES OFFICES: CHARLOTTE • GREENSBORO • GREENVILLE • ATLANTA

AN EXECUTIVE Views

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

A Lesson for All of Us

WE HAVE viewed with considerable interest the strike situation which developed in the New England textile industry in the spring, and which has carried on through to the summer. After some twenty or thirty years in this "feast or famine" industry, we have become much more cautious about praising or criticizing in situations in which we do not have all the facts and, as a result of this, perhaps we have developed a more tolerant attitude.

Nevertheless, those who have worked in this industry during the period of the rise and fall of the New England textile industry cannot help but feel that a considerable part of their troubles, at least their earlier troubles, was caused by improper personnel policies.

The New England story has, indeed, been a sad one. You will recall that around 1926 New England had 18,000,000 spindles and there was a like number in the South. One by one, mills in New England have fallen by the wayside since that time, and today there are only about 3,200,000 spindles in place in New England with only about 2,300,000 of them active.

(Incidentally, about the same number of spindles are in place in the South today as there were in 1926, which is an interesting situation to consider in the light of all the talk about migration of the industry southward.)

When the present labor situation began to develop in New England mills in March and April of this year we heard a very well informed textile man say that, in his opinion, this was New England management's last opportunity to regain control of their mills. It was his thesis that a victory for the union this time would actually be a defeat for both sides, because additional liquidations and bankruptcies would mean that neither the union nor the industry would any longer be a potent economic force.

Management Prerogative. It is our opinion that management in New England has not made the major decisions in many years. It is true that the wage notices, the operating schedules, and other such documents have been signed by the executives of the mills, but the real life-or-death decision as to work-loads, wage rates, operating schedules, fringe benefits, and the like were being dictated by the unions through the media of contracts.

When management prerogative was lost the fight was over. The union bosses were not in a position to understand what was going on within the industry and thus to make intelligent decisions, and even if they had understood they were not interested in making intelligent decisions. They were interested in the checkoff system to insure a steady income for the union and for themselves, and they were interested in showing a constantly rising wage scale and more and more "benefits."

For several decades they have bragged about the "higher" wages which New England employees have enjoyed as compared with southern employees, but they were desperately afraid to mention the fact that there were hundreds of thousands of textile operatives in New England who were not receiving any wages at all because they were not working any longer.

If it is true that "what is past, is prologue," then there is a lesson to be learned here. The mill which sells its principles for short-term profits, the mill which loses its management prerogatives, one by one, is doomed one day to close its doors forever. If you doubt that, then go to your library some day and take down from the shelves the standard textile directories for about 1925 and 1926 and read the macabre lists of deserted mills in Massachusetts, Connecticut, Rhode Island, New Hampshire, Vermont, and Maine.

What is Public Relations?

You may have read recently about the fact that the American Cotton Manufacturers Institute has now become responsible for the industry-wide public relations program which, for a number of years, has been carried on under the name of Textile Information Service (see TI May, 1955). This was an action taken at the Institute's convention in Palm Beach this spring, and it was apparently well received by the industry because the convention voted unanimously to adopt the plan.

As we understand what was done at Palm Beach, the cost of a national public relations program for the industry will now be spread over all the members of ACMI rather than being borne by a relatively small group. We heard that only about 40% of the spindles had previously been supporting the Textile Information Service, and

$[C_6H_{10}O_5]_n$

HUNTER CURING OVEN-DRYER

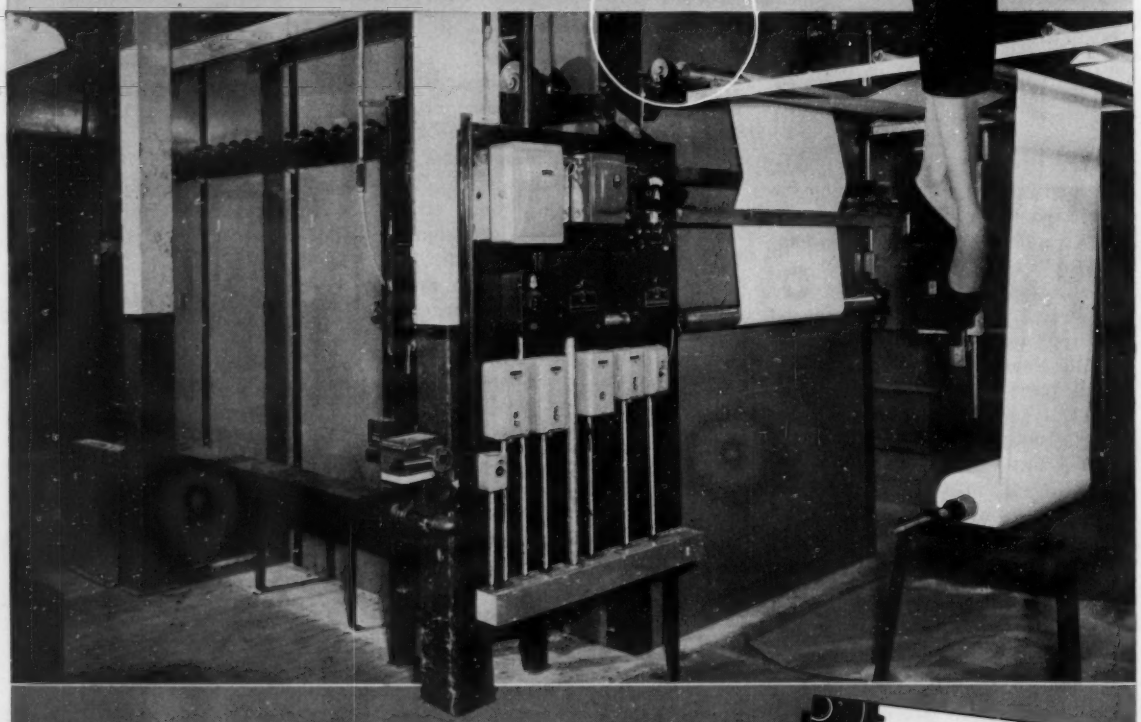
handles **ALL** *cottons and synthetics...*
cuts costs at **SLATER DYE WORKS**

At Slater, as well as at other dye works and textile mills, the HUNTER CURING OVEN-DRYER (Model B) is proving its versatility and efficiency in the curing or drying of *all* resin-treated synthetic, cotton, wool and blended fabrics.

THIS DOUBLE-DUTY UNIT HAS:

1. Even air circulation *through modern design of circulation system.*
2. Uniform temperatures *throughout the entire length and width of the oven by unique placement of nozzles.*
3. Faster, even polymerization *of resins because both sides of fabric are heated evenly.*
4. Insulated *"No-Through" metal paneling holds heat more effectively. As a dryer (69 yard capacity unit), 720 to 900 pounds of water per hour from 40" fabric.*

Get all the cost-cutting facts. Write for Bulletin CO 10 today!



JAMES HUNTER MACHINE COMPANY

BUILT BY HUNTER ...IT'S DEPENDABLE

JAMES HUNTER MACHINE CO. Hunter NORTH ADAMS, MASS.

NORTH ADAMS, MASSACHUSETTS FOUNDED 1847

plus production

- efficient operation of modern equipment
- less down time of equipment
- quick, easy repair ... rapid parts delivery

this certainly was not a very fair arrangement.

The question now arises as to what the Institute will do with a public relations program now that it has taken it over. The first job, of course, is to raise the necessary funds, and this is not going to be easy in a period of depression through which we have been and are now going.

We do not have very much advice which we can offer the ACMI Committee or Board, or whatever group will supervise the public relations program, but we do feel that some basic consideration should be given to trying to educate the industry as to the meaning of public relations.

There are all sorts of viewpoints as to what a public relations program is supposed to do, and there should be sufficient clarification so that when the expression is used, the people in the industry will attach to it the same meaning. For example, we feel that several training classes could be conducted very profitably in an attempt to distinguish between public relations, advertising, and product promotion. It is surprising how many people think that all three terms are synonymous.

Additionally, there is the very wide misconception that public relations consists of watching the newspapers very closely for any adverse editorial comment about the textile industry and then writing a blistering letter to the editor. There seems to be one school of thought which feels that such a letter is even more effective if it is accompanied by a cancellation of subscription.

Although we do not have much advice to offer other than this (and you may consider that its value is doubtful), we do feel very strongly and very sincerely that the textile industry needs a national public relations program about as badly as any industry in the country. We feel that the work the Textile Information Service has been doing over the last several years has been excellent and that it has been most helpful. When you consider the pitifully small amount of money which the industry has been spending for public relations, the results have been very, very good.

It is, of course, difficult to say what effect work of this sort has on national legislative policies, but from where we sit we doubt very much that the industry would have come out as well as it did on the tariff bill (H.R.1) if it had not been for some very fundamental public relations work which was done over the preceding months.

Law makers are human, and the more they hear about a particular question, the better informed they become, and the better informed they are the more likely they are to come to intelligent decisions.

One important way of reaching them, as well as the folks back home, is through newspaper stories and editorials, radio, television, public addresses, etc.

The mill man who thinks that either his individual mill or the textile industry in general can sit back and wait for the world to dream nice things about them is, indeed, living in a world of fantasy.

JULY

July 20-23—36th annual session **Southern Industrial Relations Conference**, Blue Ridge, N. C.

July 29-30—Annual outing **South Central Section AATCC**, Lookout Mountain Hotel, Chattanooga, Tenn.

AUGUST

Aug. 22-Sept. 9—**International Wool Textile Research Conference**, Sydney, Geelong, and Melbourne, Australia.

Aug. 25-26—Annual convention, **Southern Hosiery Manufacturers Association**, Hotel Roanoke, Roanoke, Va.

SEPTEMBER

Sept. 8-9—Fall meeting, **The Fiber Society**, Massachusetts Institute of Technology, Cambridge, Mass.

Sept. 10—Meeting **Southeastern Section AATCC**, Ralston Hotel, Columbus, Ga.

Sept. 14-16—Annual **Southeastern Personnel Conference**, Duke University, Durham, N. C.

Sept. 16—Meeting **Western New England Section AATCC**, Rapp's Restaurant, Shelton, Conn.

Sept. 20-21—**The Chemical Finishing Conference** sponsored by the National Cotton Council of America, Chalfonte-Haddon Hall, Atlantic City, N. J.

Sept. 22-25—National convention, **AATCC**, Chalfonte-Haddon Hall, Atlantic City, N. J.

Sept. 29-30—Annual outing **Chattanooga Yarn Association**, Lookout Mountain Hotel, Chattanooga, Tenn.

Sept. 29-30—101st annual meeting of **National Association of Cotton Manufacturers** and 3rd annual meeting of **Northern Textile Association**, Wentworth-by-the-Sea, Portsmouth, N. H.

Sept. 29-30—Fall meeting of the **Southern Textile Methods and Standards Association**, The Clemson House, Clemson, S. C.

OCTOBER

Oct. 13-14—49th annual meeting **North Carolina Textile Manufacturers Association**, Carolina Hotel, Pinehurst, N. C.

Oct. 17-19—Fall meeting, **National Council for Textile Education**, The Larches, Hopedale, Mass. Hosts: American Textile Machinery Association.

Oct. 17-21—43rd **National Safety Congress and Exposition**, Conrad Hilton, Congress, Morrison, and LaSalle Hotels, Chicago, Ill.

Oct. 27-28—Annual convention, **The Quartermaster Association**, Conrad Hilton Hotel, Chicago, Ill.

Oct. 29—Fall meeting **Textile Operating Executives of Georgia**, Georgia Institute of Technology, Atlanta, Ga. Carding and Spinning 9:00 A.M.

NOVEMBER

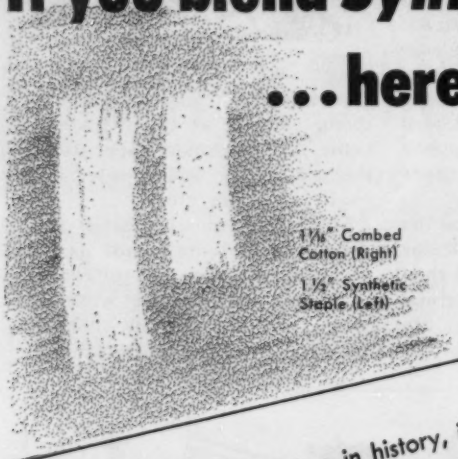
Nov. 3-4—Annual **Mid-Atlantic AIEE Textile Conference**, North Carolina State College, Raleigh, N. C.

Nov. 9-11—19th annual **Time and Motion Study and Management Clinic**, sponsored by the Industrial Management Society, Sherman Hotel, Chicago, Ill.

Nov. 14-18—**Chicago Exposition of Power and Mechanical Engineering**, Coliseum, Chicago, Ill.

If you blend *Synthetics* and *Combed Stock*

...here's valuable news for you

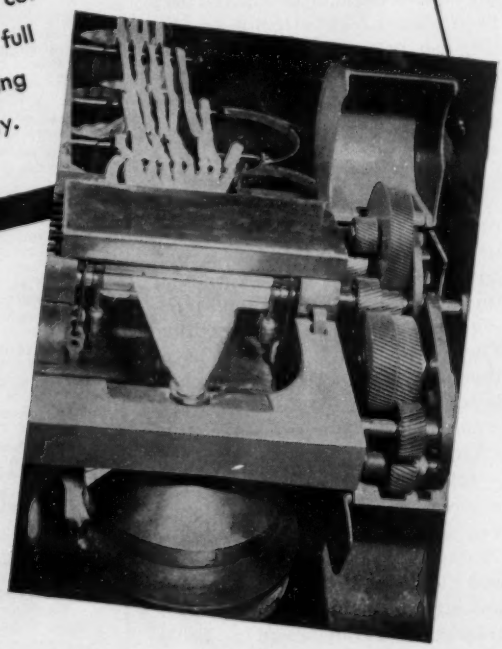


1⅛" Combed Cotton (Right)

1½" Synthetic Staple (Left)

Now, for the first time in history, it is possible for you to satisfactorily blend synthetic staple and combed cotton of varying lengths on your drawing frames. Mills report the blending of 1⅛" combed cotton and 1½" synthetic staple without any evidence of shearing or "cockling".

Now, for the first time, you can combine less expensive staple combed cotton and longer staple synthetics and get a far stronger and far better yarn in addition. If you blend synthetics and combed cotton you'll be delighted when you get the full facts on the Ideal High Speed Ball Bearing Drawing Rolls.* Write, wire, or call today.



Ideal Rolls practically eliminate static on synthetics and they produce far more high-quality drawing per delivery . . . excellent reasons for investigating fully no matter what type fibers you spin.

*Patent Nos. 2,610,363; 2,490,544; 2,412,357. Other patents pending.

Ideal Industries, Inc.
Bessemer City, N. C.

FIRST... CHECK FIRST

Where does Mason meet Dixon?

Right smack in the center of the nation's newest market—the booming South. If you need information about anything Southern, first check the folks who *know* the new South . . .

NINETY YEARS AND ONLY THE BEGINNING 1865 90 1955

THE FIRST NATIONAL BANK OF ATLANTA

First THE NATIONAL BANK OF ATLANTA

The bank that knows its neighbors

MAIL TODAY

Dept. D-1

The First National Bank
Atlanta 2, Georgia

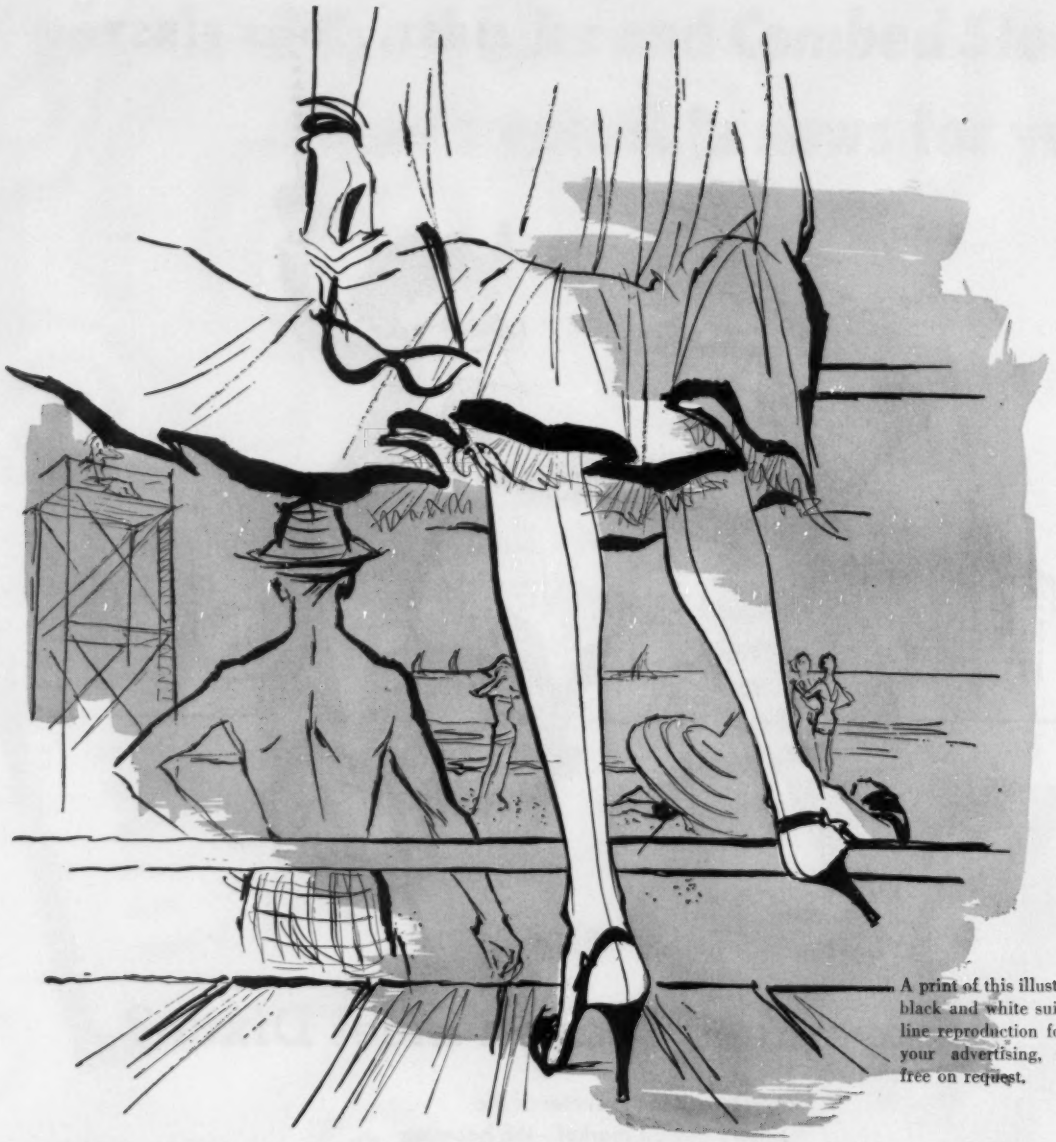
I'm not interested in Mason or Dixon, but I *am* interested in the South. Rush me facts on the following:_____

_____

Name_____

Address_____

City_____ **Zone** __ **State**_____



A print of this illustration in black and white suitable for line reproduction for use in your advertising, available free on request.

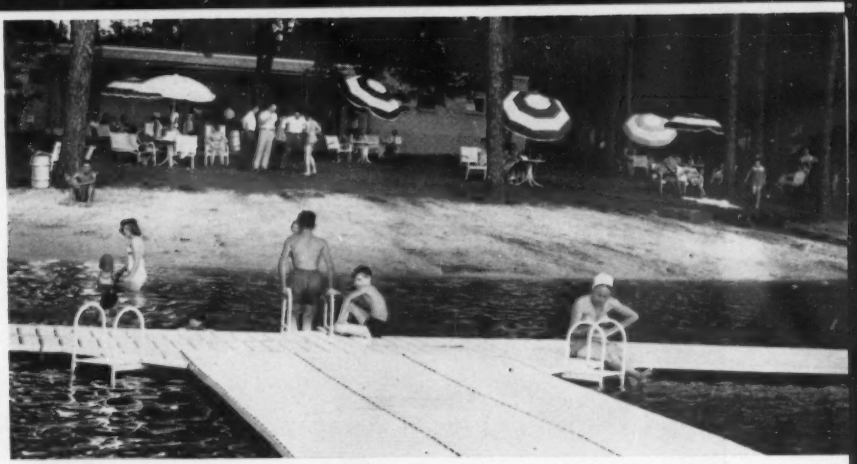
A FACT: In 1954, a total of 838 full-fashioned stocking machines were scrapped. Included were 333 51-gauge machines, indicating replacement of less productive equipment with newer high-speed machines regardless of gauge or its popularity. (Textile Machine Works 1954 Statistical Survey.)

In the hosiery industry, the one unyielding force is obsolescence. Compare the production of your least efficient machinery with a "Reading 100" Full-Fashioned Knitting Machine—in courses per minute, dozens per hour, salability of fabric. The "Reading 100" is not only a fast multiple-section machine, but it is also a reliable one. And with every Reading Machine you get the benefit of Textile Machine Works' engineering help, service and technical experience. Let us present the "Reading 100" story in your office, at your convenience. Write us today.

TEXTILE MACHINE WORKS, READING, PENNA.

The "READING 100"
Full Fashioned Knitting Machine

30 Sections 51, 60, 66, 75 Gauge



YES! EMPLOYEE RECREATION PAYS

By John Mebane
Textile Information Service

EXCLUSIVE

Good will, improved morale, and better community relations are benefits accruing to Georgia mills, according to results of a recent survey in which about 30 mills with more than 47,000 of the state's 105,000 textile operatives participated.

ORGANIZED recreational programs are paying handsome dividends in the form of good will, improved morale, and better community relations for Georgia's textile industry.

The importance of these programs as an "extra-curricula" activity is emphasized by the fact that virtually 100 per cent of Georgia's textile mills sponsor recreational projects of one type or another.

That is the conclusion reached from an analysis of a cross-section survey of the state's mills made informally by the Cotton Manufacturers Association of Georgia and summarized by the Textile Information Service.

Replies to the survey were received from approximately 30 mills with more than 47,000 employees and operating in excess of 1,984,000 spindles—more than half the total spindles in the state. They range from the smallest plants to companies with several thousand operatives.

The recreational programs themselves represent almost astonishing variety. Many embrace projects not only for mill employees and their families but extending also to the community as a whole. Of particular note is mill support of community school athletic activities—a relationship which has done much to cement mill ties to the towns in which they are located.

Actually, hundreds of thousands of dollars have been spent by mill managements in the last few years for construction of recreational facilities, purchase of equipment, and sponsorship of activities, the survey indicates.

One important observation

SWIMMING POOLS are being provided for employees and their families by an increasing number of mills, and some of these are open to townspeople as well.

drawn from the cross-section check is that mill management is accepting sponsorship of recreation as an integral part of its corporate and community responsibility. The programs have become not only more varied but more extensive in the last few years than ever before.

The projects range from baseball to swimming meets, from golf courses to shuffleboards, from fishing contests to week-end camping, as indicated in the following highlights from the survey analysis:

Facilities Provided. Since baseball is by far the most popular competitive sport with Georgia textile operatives, practically every mill, regardless of size, sponsors one or more baseball teams; and the majority provide athletic fields on which baseball as well as other outdoor games such as football and softball are played. Some have teams for children as well as adults.

A growing number of mills have swimming pools for their employees, and some of these are open to townspeople as well. Swimming and life-saving instructions are made available by a few. A company in South Georgia cosponsors with a local civic club the annual "Tobaccoland Swimming and Diving Championships," a meet which bears AAU approval and attracts experts from over the nation. Under an unusual plan, one concern built an exceptionally attractive swimming pool with nearby shuffleboards, table tennis facilities, and other provisions for recreation, and leases the pool and facilities to a local civic club whose members are all employees of the company.

Gymnasiums equipped for the playing of basketball, volleyball, and other indoor games are provided by several textile manufacturers in Georgia. Some are dual purpose buildings, being used by a few companies for square dances and other social affairs.

Children's playgrounds, libraries, outdoor grills and picnic areas and indoor kitchens and dining rooms, and club houses are other facilities that appear frequently on the Association's tabulation of survey results.

The recent phenomenal increase in the number of persons who look to fresh-water fishing as a means of relaxation has influenced textile mill management's thinking along recreational lines—several well-stocked lakes are now available to Georgia textile operatives and their families, having been provided by their employers.

Likewise, golf enthusiasts working in at least two mills located in the state may utilize golf courses which are mill owned and operated. One company with two plants located in a small town contributes toward the upkeep of the locally owned community course.

Trend to Community Centers. In

THIS SCOUT HUT was built and is maintained by a textile manufacturer in Georgia for use of a mill-sponsored Boy Scout troop.

ARCHERY is just one of the many sports the mill folk may engage in at this most attractive community center provided by a mill in the southwestern part of Georgia.

many Georgia mills recreational activity revolves around a community center which can accommodate large gatherings, and—like the swimming pools—a number of these are available for use of the townspeople as well as the mill folk.

Included in one of the community centers provided by a southwestern Georgia mill are a gymnasium, swimming pool, clinic, public library, kitchen and dining room, showers, and other facilities.

Then at a mill in the northwestern part of the state a handsome building houses an indoor swimming pool, teen-age tavern, library, and gymnasium. Lighted baseball diamonds—both regulation and midget types—are available. Also, there is a beautiful tavern which affords a meeting place for civic groups. A full-time boys' and girls' recreation director is employed to supervise the various recreational activities in this particular community to insure maximum benefit from the facilities available to the employees and their families.

Two more companies reported having recreation directors on their payrolls; both are multiplant organizations.

Scouting Activities. Fully aware of the advantages to be derived by youth from the various Scout units —Cub Scouts, Boy Scouts, Explorers, Girl Scouts, and Brownies, managers of virtually all of the mills in Georgia sponsor Scout organizations of one type or another and in the majority of instances they furnish huts or club rooms for them to meet in.

A mill in the southern part of the state, which has sponsored a Boy Scout troop for over 14 years, donated material so that the youngsters built their own camp on a lake site for week-end camping trips.

It is interesting to note that Scouts in another mill community are sent to camp each summer accompanied by leaders who are company employees and who receive their regular pay while at camp.

About two years ago a firm gave to its mill-sponsored Boy Scout troop a tenement house that had been partially burned. The youngsters dismantled the house and used the material to build a cabin in the woods on property given them by a member of the mill supervisory staff. Last year this same mill gave a house to a troop sponsored by a local veterans organization and this, too, was converted into a cabin on property belonging to the sponsor.

Half the summer camping fees for Boy and Girl Scouts in its troops is paid by a large cotton mill in the northwestern part of Georgia.

Miscellaneous Activities. Here are some other things being done in the interest of recreation. While not so common as the activities previously described, the projects illustrate the variety available and may serve as a source of ideas for those responsible for this important phase of textile mill industrial and public relations programs:

(1) Sponsor junior and senior teen-age clubs.

(2) Sponsor "midget" football team.

(3) Provide supervised play periods for children during the summer months.

(4) Sponsor an annual Easter egg hunt.

(5) Contribute to School Boy Patrol for its annual trip to Washington, D. C.

(6) Contribute to boys' and girls' summer camps.

(7) Provide an auditorium for numerous recreational as well as civic and entertainment purposes.

(8) Sponsor art classes, participants in which are taught painting, ceramics, and other crafts.

(9) Offer instruction in tap, ballet, acrobatic, toe, ballroom, and square dancing.

(10) Sponsor dramatic activities such as skits, plays, etc.

(11) Sponsor choral groups.

(12) Maintain a cottage on a large lake for supervisors.

(13) Conduct a fishing contest in the summer.

(14) Give annual barbecue and outing for all employees and their immediate families.

(15) Provide skating rinks.

Examples of Community Cooperation. As stated previously, many of the swimming pools and community centers are available to townspeople as well as mill folk. Following are other specific examples of community cooperation:

(1) Mill operates a day camp for children of the community, providing both supervisors and recreational facilities on its own property.

(2) Donated to construction of a new gymnasium and physical educational building for people of the town.

(3) Mill athletic director also is coach of local veterans organization's baseball team, and this team uses the company's athletic field.

(4) Mill helps support county youth center, veterans organization's baseball team, community swimming pool, children's baseball team, Scout organizations, and provides swimming instructors.

(5) Employees participate in local commercial bowling and softball leagues; softball games are played on company's athletic field.

(6) A company makes its recreational field and indoor and outdoor facilities available to civic and other organizations of the city—these organizations last year, for example, used the facilities 14 times with an aggregate attendance of 1,465 persons and an average per-use attendance of 104 persons.

This summary is indicative of the emphasis placed on recreation by textile manufacturing plants in Georgia.

Sheets Largest Cotton User in '54

Sheets consumed more cotton in 1954 than any other commodity, using 549,000 bales. Shirts took 515,000 bales; drapery, upholstery, and slip cover fabrics, 507,000; men's trousers, 475,000; and towels, 323,000.

These five largest users of cotton accounted for 30% of end-use consumption, according to "Cotton Counts Its Customers," the 1953-54 edition of which is now available from the National Cotton Council.

The Pacific Converter is the keystone of American Thread Company's synthetic fibers spinning. Management at Willimantic warns that you must

Adjust for the

Staff Prepared
EXCLUSIVE

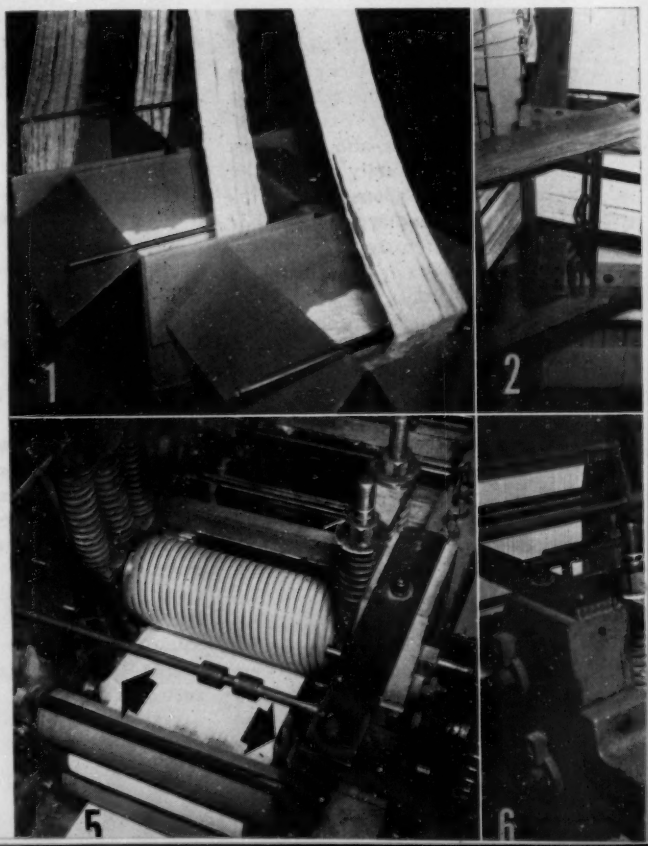
THE "AMERICAN" yarn manufacturing system at the Willimantic, Conn., plant of The American Thread Co. is engaged in turning out hand knitting and sales yarn. Equipment consists of Pacific Converters for synthetic tow-to-top processing, Pin Drafters, long draft roving and spinning frames, winders, twisters, and reeling equipment. Normally run fiber types include nylon, Dacron, acrylics, wool, and blends therefrom.

Organizing equipment to accommodate the variety of work coming into this department of The American Thread Co. is based on experience, close control of processes by scientific testing, sample runs, and a careful analysis of the product involved.

Wool top, all of which is purchased, is tested in various ways for evenness and is hand stapled by the department superintendent before it is considered for use, after which a judgment is made as to the equipment and settings to be used. Products delivered at each process are carefully tested for quality, and any process showing a substandard condition is readjusted to meet the rigid requirements that have been set up. Follow-up checks and testings are a daily routine to maintain the highest quality product possible at each process.

Synthetics, except for eliminating the top testing and evaluation requirements, are treated the same way.

Because of the significant differences in strength and other properties among fibers, machine settings and other processing conditions differ from fiber to fiber; of particular importance is the set of techniques developed by this mill in connection with the proper han-



1. Tow strand must be pulled from cartons straight; note use of guide bars.

2. Tow straightening creel cannot be too carefully positioned and tensioned.

3. Tension creel must properly weight the tow sheet.

4. Draw-in rolls must be properly weighted to prevent improper cutting.

5. Guider edges and tow sheet edges must just touch (arrows) or else stragglers will be formed.

6. Cutter pressure must be adjusted so that just enough weight is available for cutting.

7. Shuffle sections are gauged so that proper rub action will prevent "feathering."

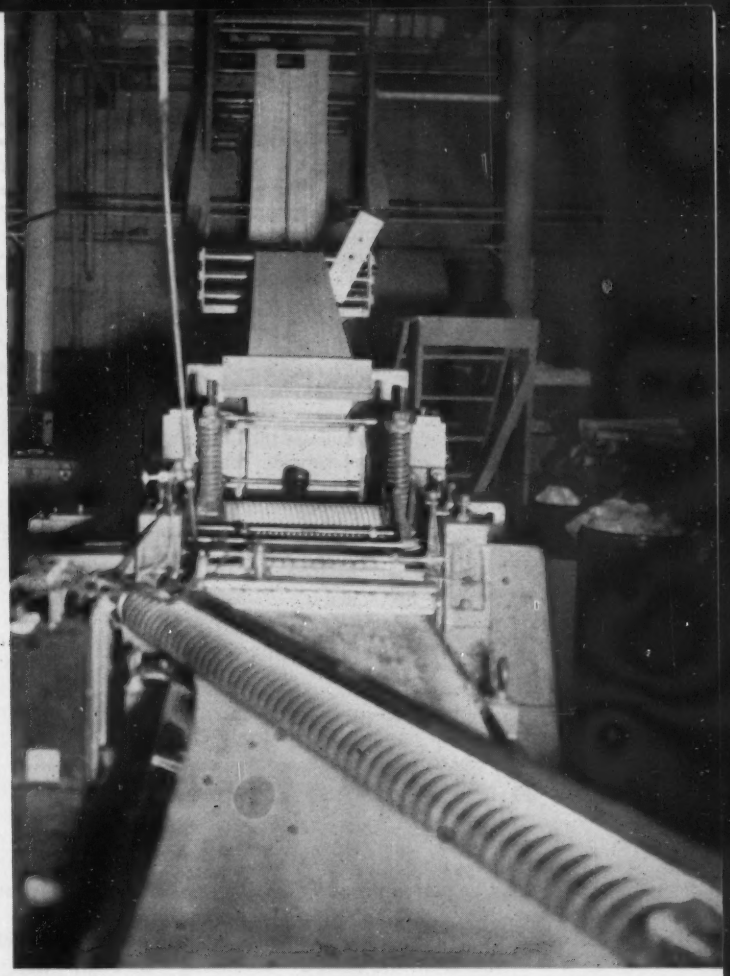
8. Frequent boarding of sliver from the Pacific Converter is done to check the work.

fiber

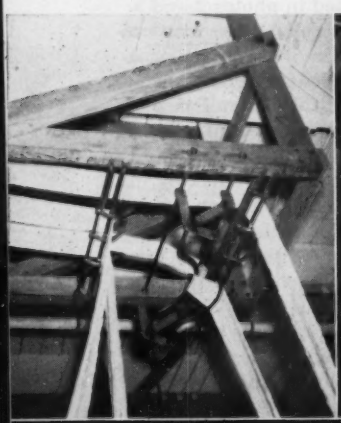
dling of nylon.

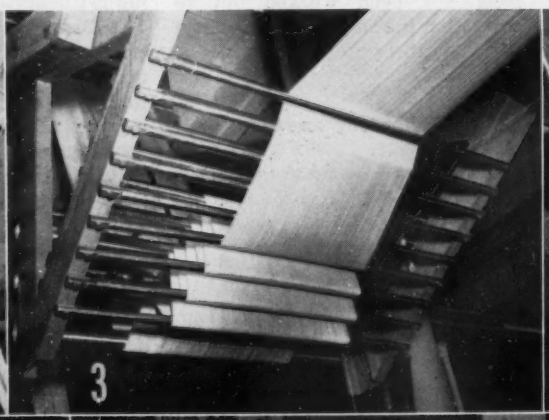
Pacific Converter: As nylon fibers do not lend themselves to breakage on a regular roller drafting set-up, the control of fiber length at this process is of the utmost importance. For any given setting of drafting rolls, fiber length must remain reasonably uniform. Several check points to assure this control are important.

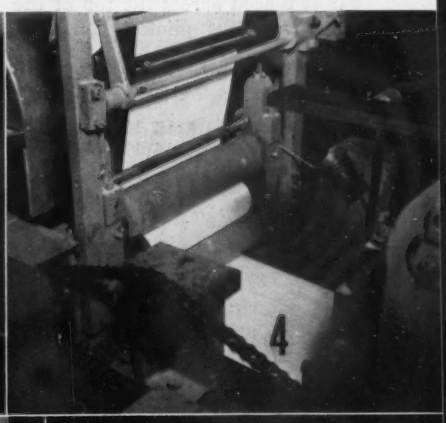
1. Forming and tensioning the

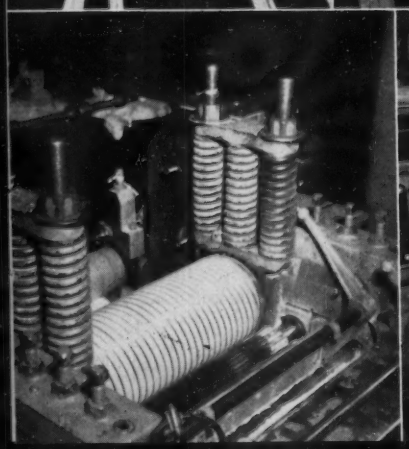


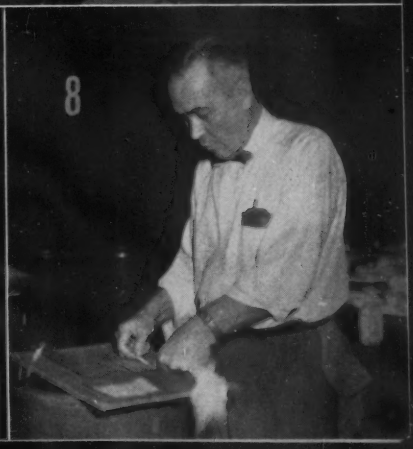
PACIFIC CONVERTER is critical machine in elimination of "stragglers."











How The Kendall Co. Plans and Controls Its Operations

By John V. van Pelt, III*
Controller
The Kendall Company

A plan is not necessarily coexistent with the formalized budgeting program of a company. Plans may be made for a variety of lives. Merchandising plans are probably made for periods of a year or even less. On the other hand, facilities planning must be made at least for the period over which the facility will pay out, and probably should envisage the entire life, from an economic standpoint, that the facility should be used. Programs covering new products should at least cover the period of time until the products will pay off on their initial investment.

At the Kendall Company, our formal budgets cover the current calendar year and are revised at midyear to go through the succeeding calendar year. Those for the current year are based upon actual merchandising programs; personnel requirements included in management of all phases of the business; anticipated sales force coverage; staffing of research departments and approved maintenance schedules.

We have a high degree of coordination, which is achieved by funneling all statistical data through the divisional controllers.

The forecast at midyear for the succeeding calendar year is predicated upon changes in direction which are known at the time of compilation. We compare actual performance periodically against the latest budget or revision thereof.

Our formal budgets do not control our current production schedules. These run against a 12-week sales projection which is revised every four weeks.

Minor new products or product divisions require a detailed exposition of projected sales, all investment (in physical terms) and cost factors with gross profit computed for three to five years ahead. Reviews of performance are made by divisional managements at increasing intervals of time to determine performance against objectives and the need for corrective action.

Major new product programs require a far more comprehensive study and are carried down to a point where there will be an accumulated merchandising profit. Major facilities are predicated on long-range merchandising requirements that carry us through a pay-out period. Construction expenditures and operating

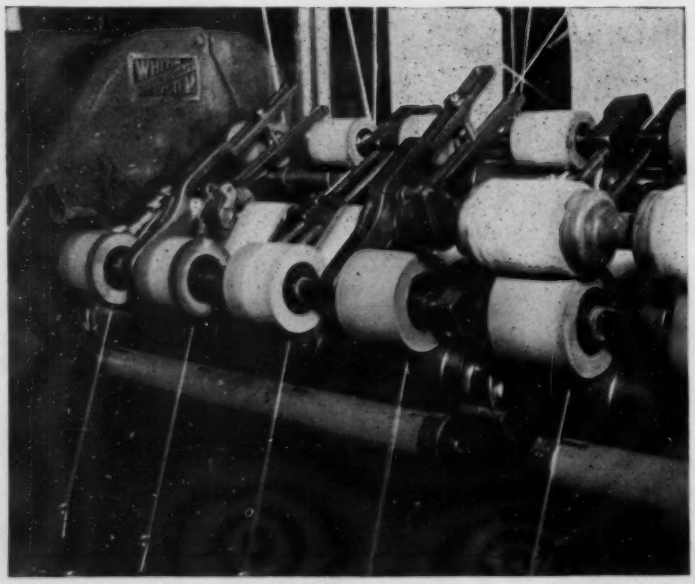
*Excerpt from an address presented at the 1955 Eastern Spring Conference of the Controllers Institute of America.

tow: Cases must be placed properly beneath the tow straightening creel. To aid in straightening the tow as it is drawn from the case, a bar is placed across the top of the open case (see photo 1 on page 70). Arc bars to prevent twisting have been provided for the tow straightening creel, and threading through the tension creel has been worked out to straighten the sheets of tow to present to the converter a combined sheet made from several tow strands that is uniform in width, thickness, and tension. This threading is illustrated in photos 2 and 3.

2. Draw-in rolls are also a critical point in the control of a uniform fiber length. Pressure on the rolls, condition of roll covering, etc., play an important part in controlling fiber length. If roll tensions are too low or covering in bad condition, slippage can occur and result in long fibers. There is careful control of tension at this point; it must be constant for any given condition. If big differences in conditions or products being run occur, pressure, tensions or roll drive ratios may be adjusted.

3. The cutter-guides that guide the tow into this unit are important. Square and uniform tow selvages must be maintained to prevent long fibers or double-length fibers. Pressure and condition of the cutter are important. Cutters must be kept sharp and free of nicks. Pressure on the cutter is adjusted to some extent to meet varying conditions, but for the most part machinery manufacturers' recommendations are followed.

SPINNING FRAME has been equipped with extra-long screw on weighting arm to provide increased pressure.



costs are made in great detail. On major projects we usually establish a task force to make the studies, so we have a proper representation of all interested functions.

There are certain basic premises which hold true for all business if we can hope to be competitive:

(1) We should weigh all possible contingencies before embarking on new projects and should constantly apply the same tests to continuing projects;

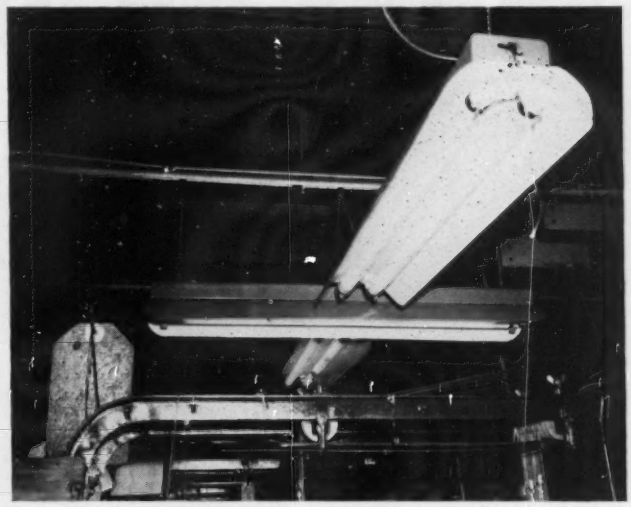
(2) In studying a project we must deal with the best possible estimates of future conditions, rather than historical experiences;

(3) In devising programs we should avail ourselves of the best thinking of all members of the management;

(4) We must constantly be aware of the factor of human activation in appraising individual courses of action.

Lighting Arrangement Cuts Shadows; Improves Weave Room Efficiency

This right angle placement of fluorescent fixtures above looms at Bluebird Silk Mfg. Co., York, Pa., has eliminated shadows in front and back of the dobby equipped machines.



4. To check for proper cut, settings, etc., fibers are pulled out by hand at the nip roll and examined at each start-up.

5. Rub action: The two shuffle sections which impart a rub motion to the cut fiber sheet must be properly adjusted to prevent "feathering" or uneven sheet. This is a trial and error adjustment but is guided generally by more open settings for bulkier sheets.

6. Aprons must be kept in good condition, free of oil or foreign matter, and under proper tension.

7. Delivery: Adjustments past the shuffle section are not too critical. Delivery apron must be kept clean and dry in order for sliver to be formed by diagonal roll.

8. To check product being delivered, a length of sliver is sampled from every other can doffed, and boarded or stapled by the operator.

Pin Drafting. Breaker pin drafting and sufficient finisher operations to produce the quality desired are used for nylon. Coarser pinning in the faller bars is used for nylon than for wool or other synthetics. Number 15 bars are used in the breaker, with various combinations of 18, 22, and 29 used in the finisher operations.

Pressure on the rolls is somewhat higher than that used for wool. Improper roll pressure, defective rolls, and varying tension cause thick and thin or "sausage" effect in the delivered sliver.

Pin drafting pretty well determines what the evenness characteristics of the finished yarn will be.

Roving. Fiber crimp is an important consideration in this first roller drafting operation. Allowing for the crimp to be pulled out under tension, ratch settings are set a little over the fiber length to allow for this "stretch." Again, roll pressures are higher for nylon than for wool or other synthetic fibers.

Twist is a critical factor in nylon roving—if it is too high, hard ends are a problem; if too low, the short fibers will protrude from the strands and cling to under layers of roving on the bobbin, causing break-backs. For good operating conditions it has been found the best results are obtained from "fresh" roving. Therefore, roving production is kept carefully balanced with spinning requirements.

Spinning. Roll settings here parallel those used for roving. In order to increase roll pressures, special long screws have been installed on roll saddles. Front roll pressures in general follow normal machinery manufacturers' recommendations.

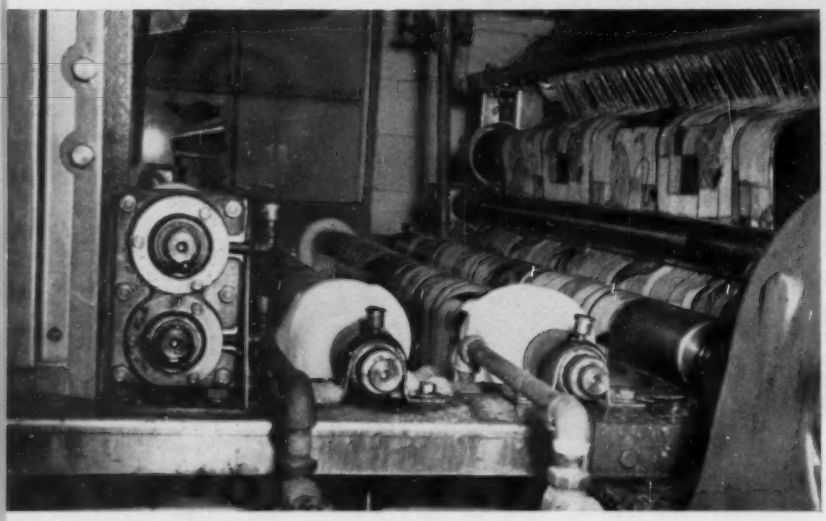
One interesting feature here is the practice of removing a top roll that has a lap and replacing it with a clean roll. This prevents roll damage by hooks or knives when removing laps from rolls that are running.

A final consideration in examining the American System manufacturing problems as encountered at American Thread is humidity and control of static. Approximately 1 per cent antistatic lubricant applied at the converter has been found to keep this problem under control. Humidity is kept as close as possible to 55 per cent for optimum spinning operation.

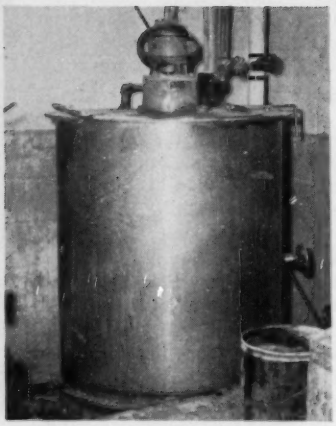
The careful control of all factors mentioned, plus control of many other details, insure few ends down at spinning and a quality product delivered to the customer.

From a mill's experience with pre-shrunk drapery fabrics—

11 Ways to Better



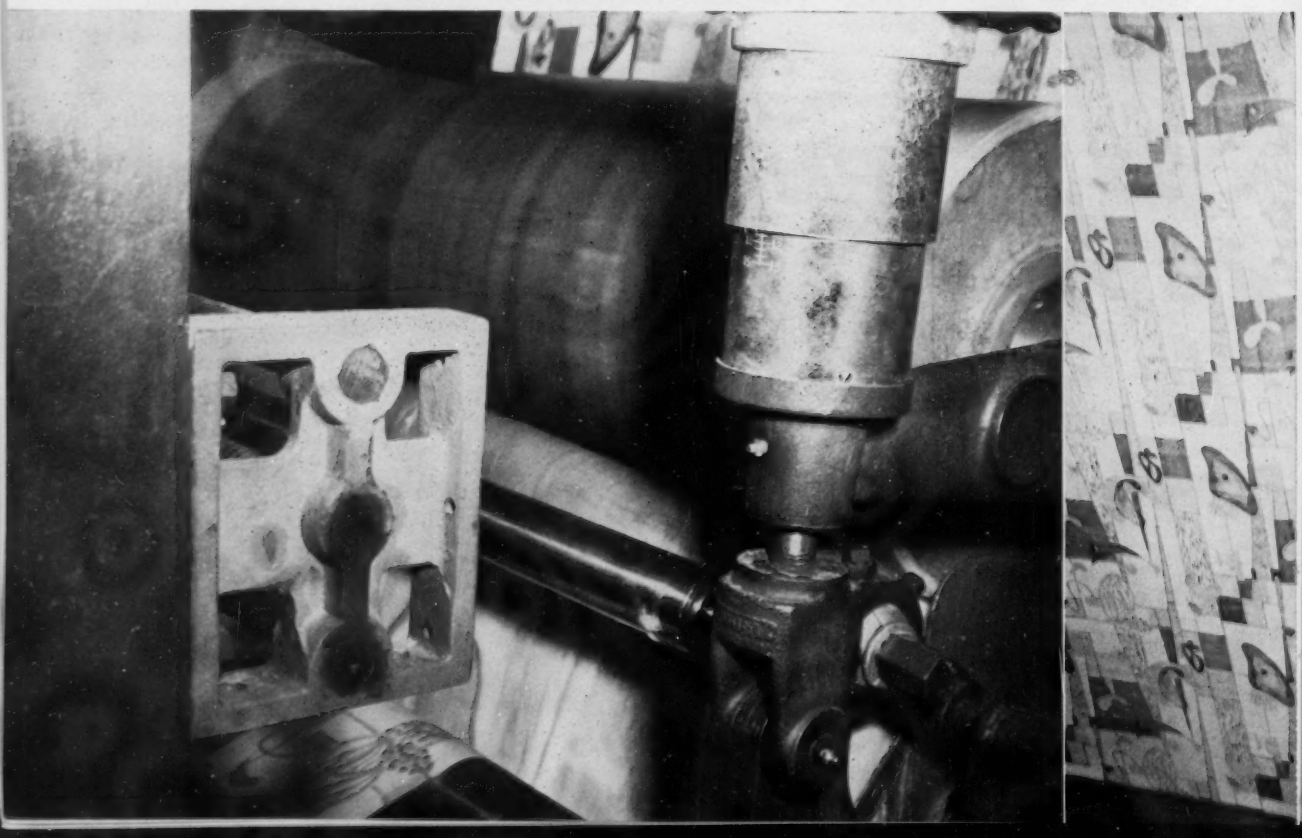
SOAP AND RINSE before applying resin.



CONTROL TEMPERATURE accurately when preparing resin emulsion; not over 120 F in most cases.

"Textile Industries" staff photos by courtesy of Santee Print Works

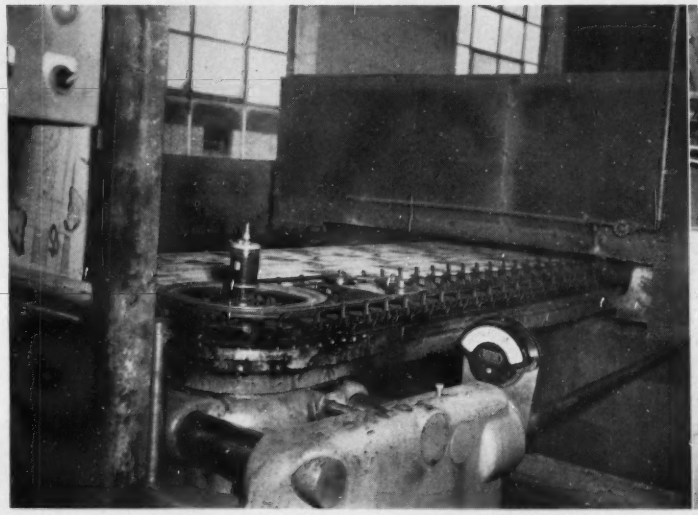
CORRECT PRESSURE at padder varies with weight of goods; tests should be made to determine pressure for proper pick-up.

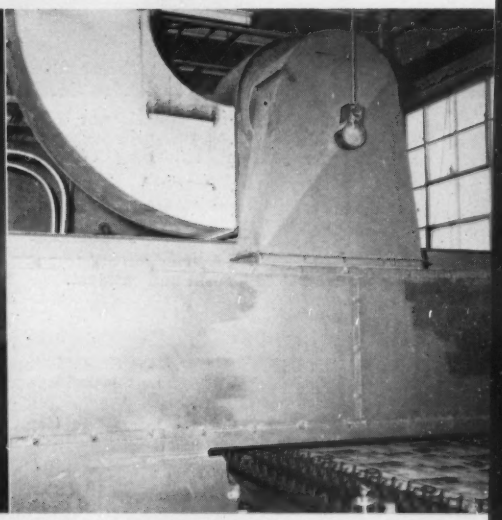


Resin Finishing

Staff Interview

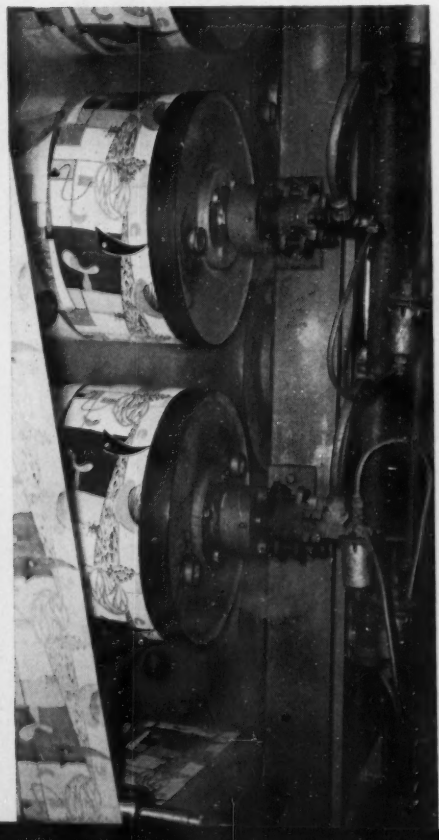
EXCLUSIVE





IN CURING (left) frame speed and temperature must be correct for proper cure: temperature high enough to permit catalyst to work, but not high enough to cause scorching; optimum conditions should be determined by test. In most cases, 310 to 340 F is correct range. Curing oven (right) must have proper exhaust to draw out fumes, or fabric will be discolored.

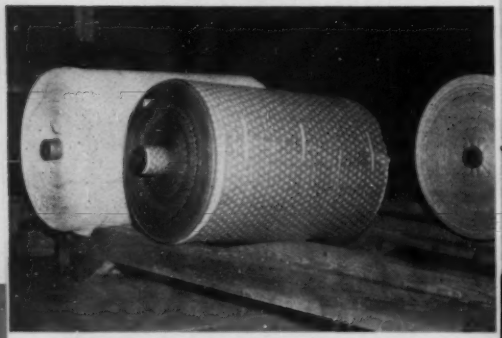
PRE-DRY before curing, to prevent migration of resin to surface of the fabric.



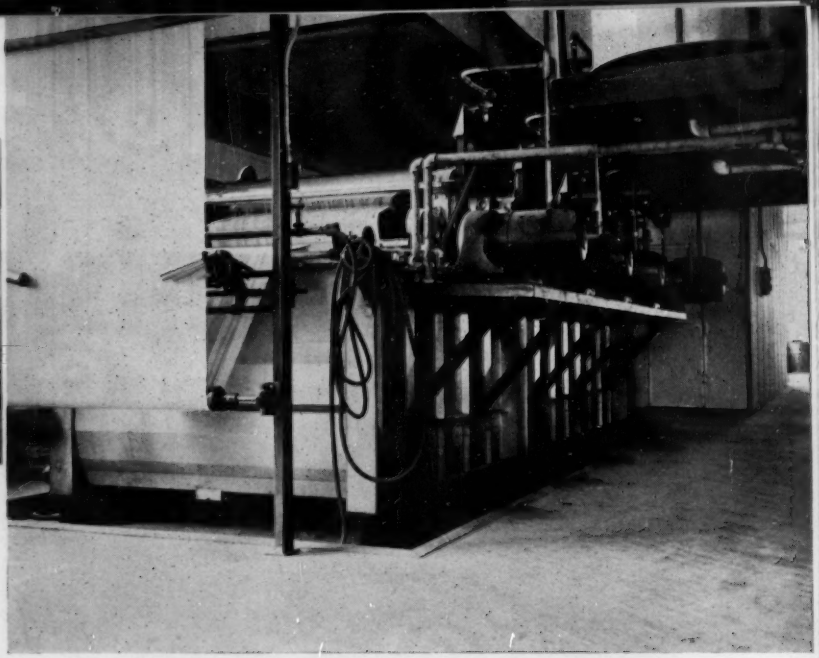
AFTER CURING, goods to be batched should first be run over a cooling cylinder (not in use when this photo was taken).

Better Resin Finishing

(Continued)

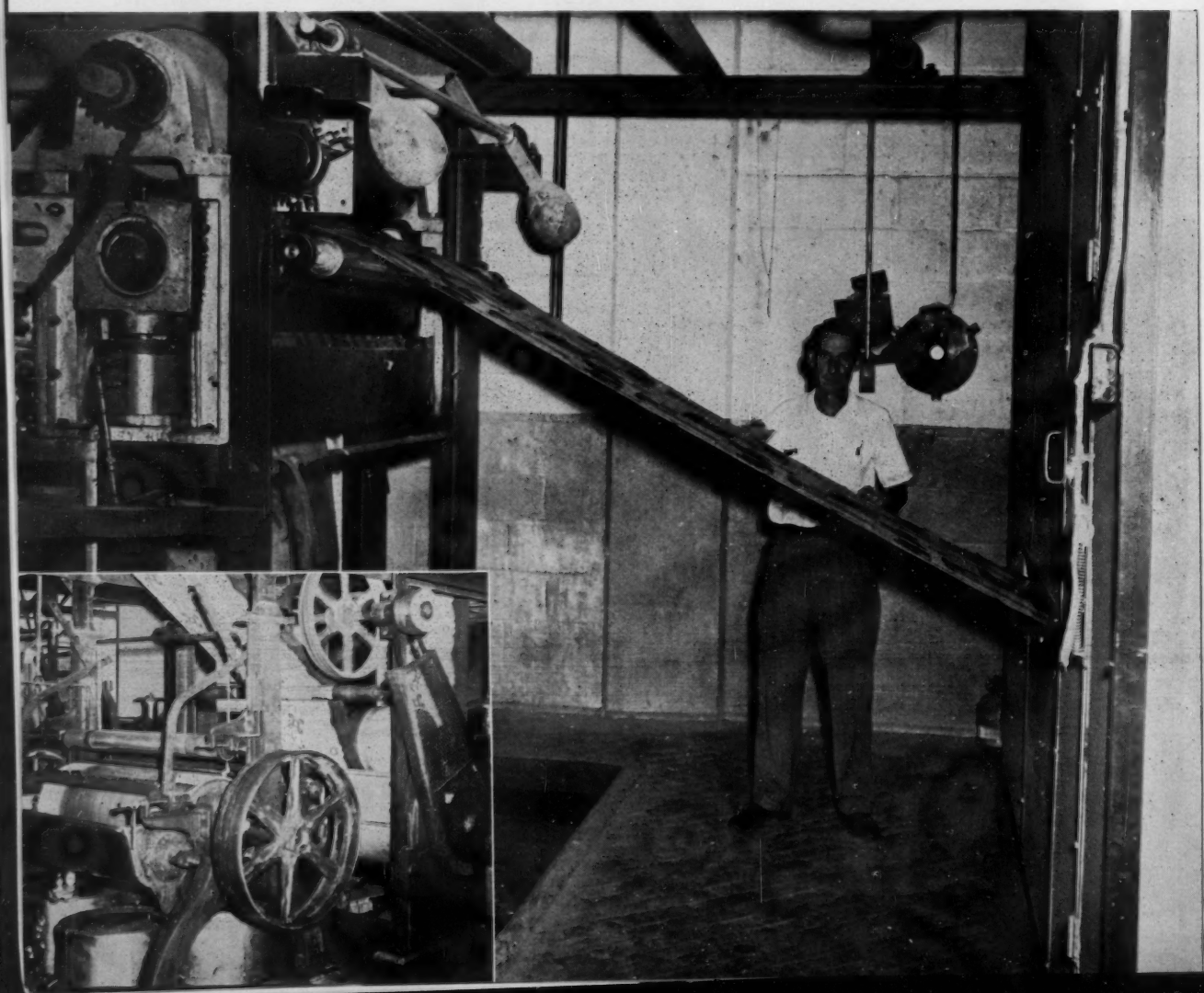


BATCHED GOODS should not stand more than 3 to 4 hours after curing, to prevent tendering of the fabric.



SOAP GOODS after curing to remove excess resin and catalyst.

MINIMUM POSSIBLE TENSION should be on fabric between soaper and dryer. Lower left: Finishing agents such as softeners may be applied in second run through range. Tommy Dodd in left foreground applies backsize when needed.



Don't overlook the

ESSENTIALS FOR GOOD NAPPING

Staff Interview

EXCLUSIVE

GOOD NAPPING may be accomplished only if full consideration is given to the type or weight of cloth being napped, the twist in the yarns, whether it is made of wool, cotton, or synthetic fibers, and only if the napper is in first-class condition.

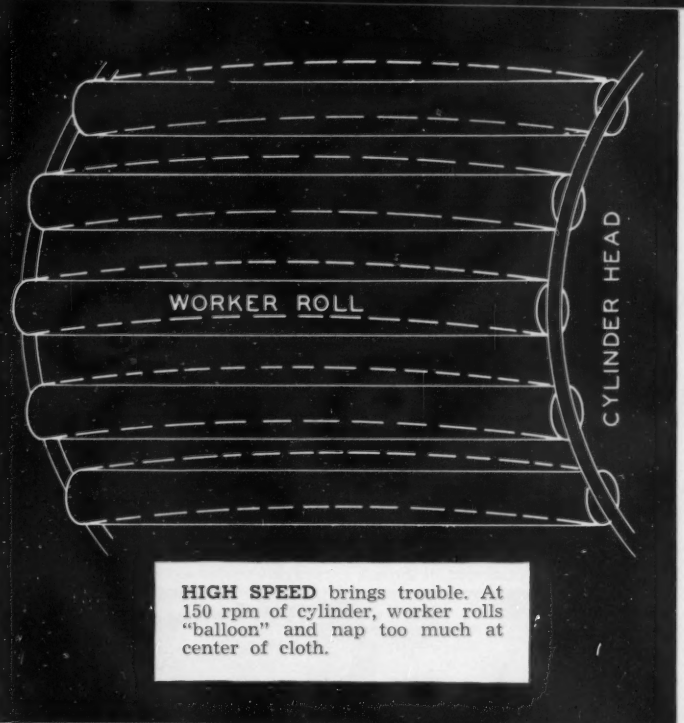
It is helpful to permit the fabric to attain napper room conditions of temperature and moisture. Also, it is desirable to let the fabric rest for a day to permit the yarn to relax and the weave to become somewhat "stabilized" before napping.

Tensions. In running woolens, less tension is required to get lofty napping than with cotton goods of comparable weight and construction. Woolens are usually the easiest fabrics to nap and may be run at higher speeds than other types of goods.

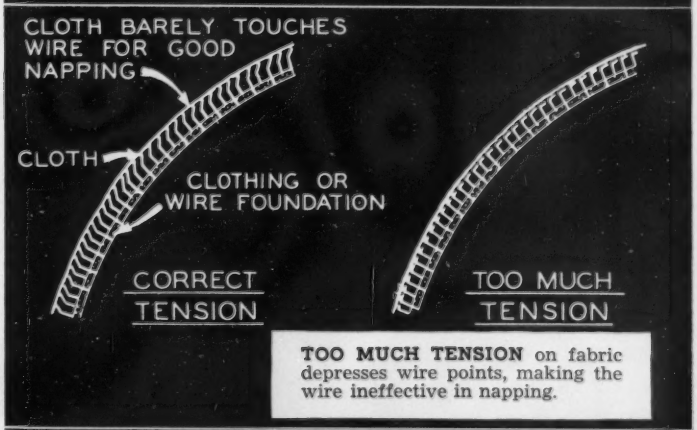
A more satisfactory nap may usually be obtained on cotton when the fabric is processed at higher temperatures. Apparently the higher temperatures make the fibers more pliable and flexible.

Do not run the fabric under too much tension. When the cloth lies

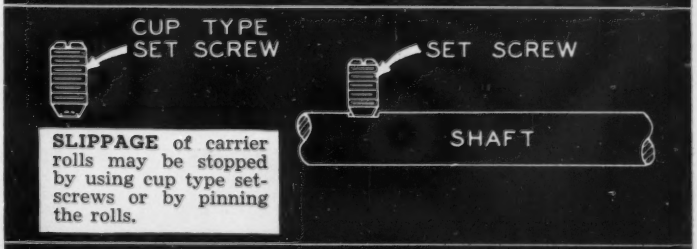
These comments do not cover knit goods napping specifically but some of the statements may apply. More cotton goods are napped in this country than any other type of fabric. Consequently, the cotton goods napper is held foremost in mind here, although woolens may be napped on the same machine. Also, the double-acting napper is principally referred to.



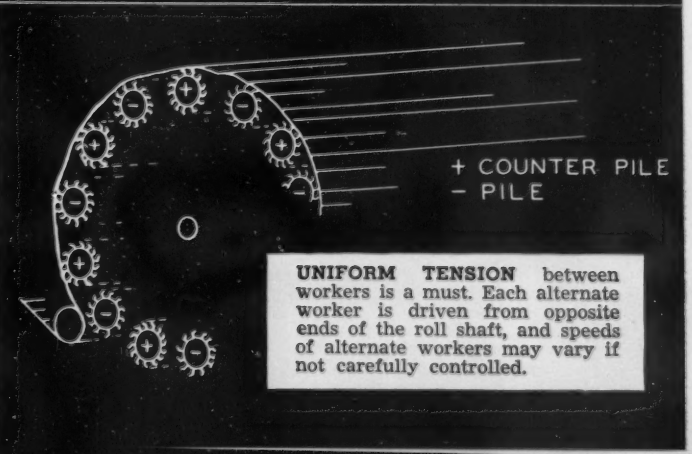
HIGH SPEED brings trouble. At 150 rpm of cylinder, worker rolls "balloon" and nap too much at center of cloth.



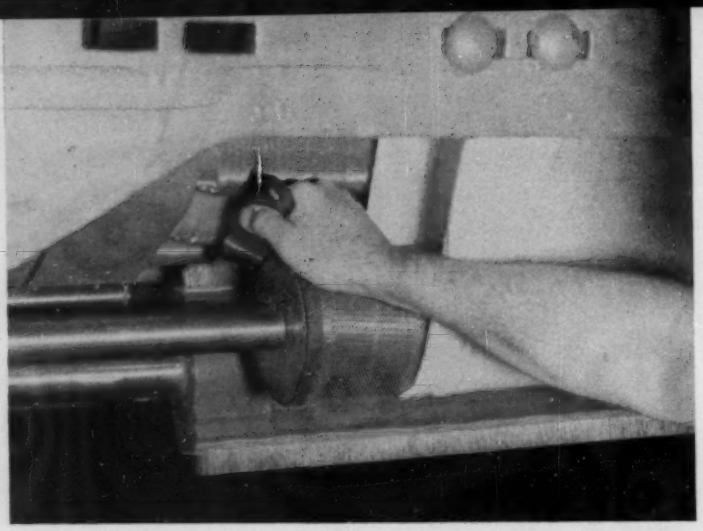
TOO MUCH TENSION on fabric depresses wire points, making the wire ineffective in napping.



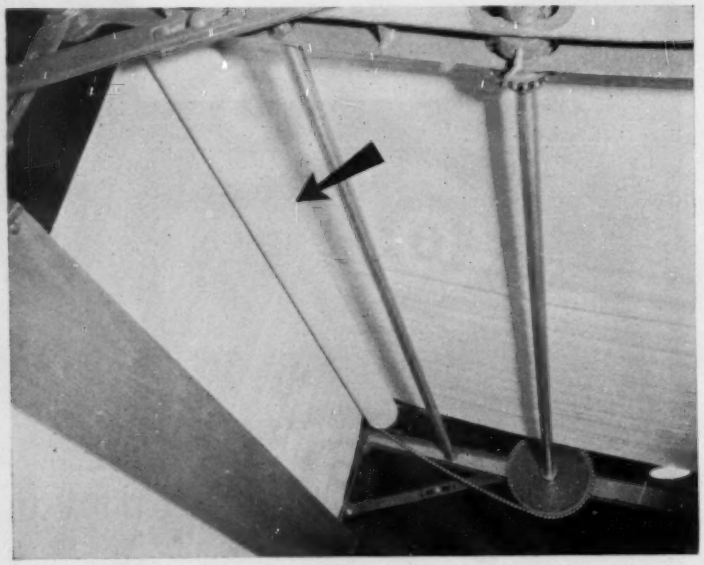
SLIPPAGE of carrier rolls may be stopped by using cup type set-screws or by pinning the rolls.



UNIFORM TENSION between workers is a must. Each alternate worker is driven from opposite ends of the roll shaft, and speeds of alternate workers may vary if not carefully controlled.



SET CLEARERS with 32 gauge on 80" nappers, 28 gauge on 100" nappers.



CARRIER ROLLS covered with rubber, instead of velvet, plush or corduroy, help maintain even tension and control of cloth.

ENERGY INDICATORS have proved helpful in giving a good starting point for duplicating work in instances where the previous settings were recorded.

snugly on the cylinder, there is a tendency for the cloth to run away from the point of the wire. This condition is attributable to the fact that napper wire is pliable, and when it is squeezed the point is bent downward. When the fabric is run somewhat loosely, the napper wire points stand more nearly upright, thereby permitting more satisfactory contact with the fabric and producing a much better nap.

All carrier rolls in the napper should be tight or free from slippage. On some nappers the rolls are secured in place by set screws which wear round on the end, thereby permitting slippage. This problem may be solved by using cup type set screws or by pinning the rolls.

First and last carrier rolls covered with rubber have proved to give good control of cloth going through the machine. These rolls are usually covered with plush or corduroy.

Energy indicators on the napper have proved helpful as a gauge to give a good starting point for duplicating the finish on certain types of goods when an order is received for additional quantities.

Common practice on part-wool blankets is to break the goods on a single-acting machine and finish on a double-acting napper, because the single-acting machine usually softens the goods quicker than a double-acting machine, thereby saving some passes. Two passes on each side on the breaker and as many as necessary on the other machine to get the desired finish is the procedure most often utilized.

Cotton flannel shirtings may be well finished and broken on double-acting, 36-roll nappers. Canton flannels are often started on double-acting machines and finished on box type nappers.

Speeds. Napping speeds may be termed critical. Usually, it is considered best to run the cylinder at 80 rpm on 90" double-acting machines; 100", 75 rpm; 120", about 70 rpm. On 80" knit goods nappers, maximum speed should be 135 rpm for the cylinder; on 90" machines, 120 rpm; on 100" machines, 100 rpm. 14-18 yards per

minute is considered a satisfactory speed on 36″ cotton flannel shirting on a 90″, 36-roll double-acting napper operating at 78 rpm cylinder speed.

Higher machine speeds frequently bring trouble. For example, at 150 rpm of the cylinder, the worker rolls "balloon" or have eccentric motion near the center and nap too much in the center of the cloth. The nap is also uneven.

Wrinkles. If the cloth has a tendency to wrinkle going over the machine, the cause of the wrinkles may be too much counter pile napping, wherein the workers produce the wrinkles in the cloth by tending to slow its movement through the machine.

If the cloth has a tendency to run slack in the back, the trouble may be too much pile napping. The remedies for these difficulties lie in slowing the worker rolls and equalizing the napping of pile and counter pile without utilizing too much tension on the fabric. Correct tension on the fabric may be determined only by good judgment and will vary from one cloth to another.

Selvages. Uneven or tight selvages permit the cloth to be loose in the center and tight on the edges, thereby allowing more napping at the center of the cloth. In such instances it is desirable to change the construction of the selvage at the loom by reeding the selvage differently or by changing the weave of the selvage.

If the clearer balloons or sharpens the wire more in center of roll than on edges, uneven napping may be produced by napping more at one place than at another; such as in the center or on the edges of the fabric. To remedy this difficulty, set the clearers properly by using a 32 gauge on 80″ nappers and a 28 gauge on 100″ nappers.

Wire. Dull napper wire often produces uneven and otherwise unsatisfactory napping. The wire should be ground evenly and lightly to prevent wearing out the points and removing the temper in the wire. Also, light grinding prevents hooking the wire. Face grinding is favored in many instances. The disk grinder is favored for side grinding. The disks should not be set too deep for this type of grinding.

A reversible grinder is desirable for side grinding to follow the spiral of the clothing when trying to obtain the correct needle point on the wire.

Clothing. If clothing is put on the worker roll too lightly, the heel of the wire is held too tightly, thereby making the wire too firm and inflexible. ¾″ clothing should be applied with 2½-3 lb of tension —the wider the clothing, the more tension required to wind the spiral satisfactorily.

Synthetics. The synthetic fibers are usually much harder than others and are therefore more difficult to nap well. Fabrics made from the harder fibers may be napped well by applying more energy on the worker rolls. In other words, the amount of work done on the fabric by the pile and counter pile (worker rolls) should be increased according to (1) the requirements of the fiber and fabric construction, (2) treatments the fabric has been subjected to prior to napping, and (3) the desired appearance of the napped fabric.

Chemicals. Goods subjected to acid treatment before the napping operation have a harder surface to nap. Bleaches also make the fabric harder and more difficult to nap. Dyes vary in their effect, depending upon the color and type of dye. However, fabrics dyed in the darker shades are usually more difficult to nap because of the hard finish imparted by the dye.

Softeners usually help make chemically treated fabrics easier to nap. Resin treatments affect the fabric nap differently, depending upon the type of resin used, but in many instances a softener helps in obtaining a better nap.

Oftentimes difficulties encountered at the napping operation are attributable directly to a preceding process which rendered the fabric unsuitable in some respect for satisfactory napping. The solution to these problems naturally should be placed by management in the hands of those responsible for the fault and should not be left in the hands of the person in charge of napping to find that his resources are useless for making the finished goods satisfactory.

Research on Wool Waste Aids Attack on Stream Pollution Problems

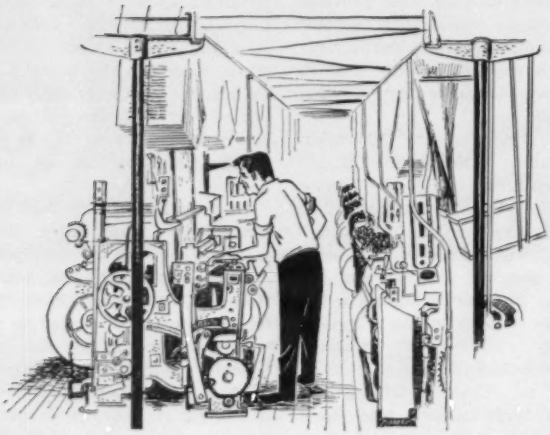
An improved method for treating wool-scouring wastes, developed by a U. S. Department of Agriculture scientist, promises to help wool processing plants solve their stream pollution problems. Further research also may show how to increase the recovery of wool grease.

At the Western Utilization Research Branch of USDA's Agricultural Research Service in Albany, Calif., chemist Willie Fong has worked out an improvement in the conventional acid process for grease removal. It involves adding to the wastes an inexpensive, claylike, highly absorptive mineral, called bentonite. Fong's method calls for first acidifying the waste with sulfuric acid (to a pH level of 3 to 4) and then adding 1 to 5 pounds of bentonite per 100 gallons of waste.

In laboratory tests, this treatment removed 95 to 98 per cent of the wool grease, compared to the 60 to 80 per cent removed by acid alone. Addition of bentonite improves over-all clarification of the waste material and reduces its pollutional character (as represented by oxygen demand) about 90 per cent. It also reduces the amount of acid needed.

Tests of the new method in a commercial plant have been satisfactory from the standpoint of clarification of the waste. However, operators have not found it practical so far to recover wool grease from the precipitated sludge. An improved method for processing the sludge for recovery of grease is the aim of current investigation by scientists at the laboratory in California.

quality check-up for a



Staff Prepared

EXCLUSIVE

A SIX-POINT program was adopted by a filament weaving mill recently as part of a general plant revision plan.

The set-up included equipment, yarn, and cloth checks, the installation of grading reports, and a quality index chart.

As a result of a three-month trial of the system, the percentage of seconds was reduced from 15% to less than 5%.

Point 1. Periodic machine to machine tours. The plant manager handled this step in the system. It involved visiting each department at least once a day and inspecting each loom in a general way at the start of each shift. Several points were watched for: over and under-weaving of specified yardage, proper pick-wheel and filling, Jacquard pattern errors, and a check on just whether things looked right.

EQUIPMENT CHECK-UP

Department	Check Point	Check For	Frequency
Quilling	Quills (full)	Rough Spots	Weekly
		Large knots	"
		Soft	"
		Bunch	"
	Quills (empty)	Rough or cracked	Monthly
	Tensions	Should be 10 plus 1/2 the denier	Weekly
	Pinboards	Bent pins	Monthly
	Thread guides	Cut or rough	Weekly
		Dirt	"
Picking	Frames	Correct measurement	Monthly
Warping	Beams	Loose heads	Monthly
		Not true	"
		Bent gudgeons	"
	Lease reeds	Sharp, cut, or rough	Weekly
	Section reeds	Sharp, cut, or rough	"
	All glass and porcelain	Sharp, cut, or rough	"
Slashing	Formula	Measurements	Spot check
Winding	Thread guides	Sharp, cut, or rough	Weekly
		Dirt	"
Weaving	Feeler motions	Sharp tip	Monthly
		Setting	"
	Pick wheel	Loose	Weekly
	Take-up	Tight and/or uneven bearings	Monthly
		Worn gears	"
	Whiproll	Not true	"
		Alignment	"
	Crankshaft	Loose	"
	Crankarm	Loose	"
	Rocker shaft	Bad bearing	"
	Clutch	Not grabbing correctly	"
	Reed	Loose or tight	Weekly
		Bent, loose, or cut dents	"
	Shuttles	Cracked or rough	"
		Sharp, cut, or rough guides	"
		Quill alignment	"
		Yarn tension	"
		Protruding, worn fur	"
	Center fork	Sharp, rough prongs	"
	Picker	Rough wood	"
		Worn leather	"
	Temples	Setting	"

THIS SCHEDULE TO BE FOLLOWED BY DEPARTMENT FOREMAN

Point 2. An equipment check-up for each department was scheduled. A great many seconds were known to have been caused by mechanical failure and worn parts. The schedules were made up after checking with foremen and "Weaving Filament Synthetics: Defects, Causes, and Remedies" (TEXTILE INDUSTRIES, May, June, July, August, October, 1953). The first time these checks were used, foremen uncovered 33 instances of dangerously worn shuttle thread guides, 42 instances of rough or split shuttles, 12 feeler motions in need of repair, 19 badly worn thread guides on quillers, and one badly scored glass reed in the warping department.

filament weaving plant

How a small weaving mill reduced seconds by more than two-thirds

GRADING				
	PENALTY POINTS			
	10	5	3	1
VERTICAL	I		I	II
HORIZONTAL		I		III
REMARKS				
PENALTY 23 FIRST ☑ SECOND ☐				
INSPECTOR AV. FOREMAN				

Point 3. Grading report was stamped on the reverse side of each loom ticket. The report is really a summary of the standard examination for finished goods adopted by Textile Distributors, Inc. Imperfections were classified as vertical or horizontal and each one assigned a penalty of 1, 3, 5, or 10 points, depending on severity. No one yard was penalized more than 10 points. Penalty values were judged by inspectors and tabulated on the report. If the total exceeded the yardage of the piece, it was graded a second. Any defects other than minor ones were called to the attention of the foreman.

CONSTRUCTION REPORT

Date_____

L - Length
NW - Net weight
PW - Pick wheel
CP - Counted picks/inch

STYLE	WT/100 YDS			TAKE-UP			ENDS PER INCH	WIDTH		
	L	NW	WT/100	PW	CP	%TU		MAX	MIN	AVE

Point 4. Construction checks were made on this report form. At least three pieces of each new style were tested for the various items shown on the report, and running styles were spot checked. Any irregularities uncovered were corrected when possible, but generally the information picked up was of greatest value in long range fabric planning and in costing.

YARN CHECK

YARN	NUMBER OF TESTS	WEIGHT		REGAIN		CORRECTED WT	COUNT OR DENIER	YDS PER LB
		AIR DRY	BONE DRY	ACTUAL	STANDARD			

Point 5. Yarn checks were made at random on all yarns entering mill. This served to weed out defective raw material and to check any yarn that was new to the mill for whatever running hints could be picked up. ASTM testing methods were used to determine yarn number and yards per pound from the data listed on the yarn check form. For example, filament rayon yarn would be tested by averaging test results of three 300-yard test skeins. Skein weight was corrected to standard regain by determining actual regain and:

$$B = \frac{S \times 111}{100 + A}$$

B - corrected skein weight
S - actual skein weight
A - actual per cent regain

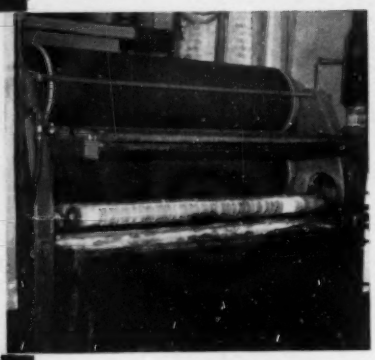
and $D = H \times 32.8$

D - denier
H - corrected weight of skein (grams)

Point 6. Month-to-month analysis of quality was made by using information available on piece goods grading. This was taken from mill invoices which listed each piece shipped plus its grade expressed as a first or second. A percentage was calculated of second quality yards on the total yards shipped for the month. The result was plotted on the chart shown.

How Frankford Woolen Mills get Dimensional

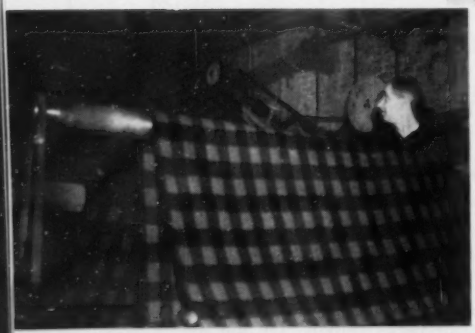
MIXING is done in this 200-gallon tank. The ingredients are mechanically mixed and piped to the padder.



PADDING the mixture through a double dip immersion and squeeze follows. The double dip helps to ensure good penetration into the fabric. Tension is applied to the goods on the padder shown here so that about 5% strength results.

FIRST DRYING AND CURING are performed in two separate passes through this dryer. Drying is done at 250 F, curing at 320 F for 3 minutes. Goods pass through under tension and set at a width one-half inch over the desired finished width. Tension or relaxation is not critical in curing but wrinkles must be avoided.

WASHING is the next step and it must be done with as little tension as possible. A dolly washer is used for 20 minutes with goods being run in a soda ash bath; to neutralize the acid pH and to allow wet relaxation. Here the washer is shown being unloaded.



FINAL DRYING relaxes the fabric and removes the inherent excess shrinkage. Goods are overfed into a pin box dryer. If such finishing treatments as semidecating and napping are included after this, the goods must be run with a minimum of warp tension to prevent distortion of the fabric.

Staff Prepared

EXCLUSIVE

AT LEAST two woolen mills are currently obtaining stabilization in finishing fabrics containing up to 60 per cent wool by conventional application of the Avcoset technique. The method, developed at the Textile Research Department of the American Viscose Corp., Marcus Hook, Pa., is intended primarily for rayon fabrics; this work with wool is the result of discovery by the Department that the finish is also successful with a wide fiber range.

Because the name Avcoset is tied in with a color fastness requirement as well as the shrinkage control, applications to wool blends have not been OK'd for use of that name; wool dye groups applied to these blends have not yet reached the required level of fastness.

The Avcoset Program. This is a promotion and quality control program performed as a service to licensed finishers and converters. The finishing technique is explained to the mills by the company and periodic laboratory tests are made to check three factors: Shrinkage—no more than 2 per cent for apparel in wash tests (3 per cent for drapery, 5 per cent for laminates). Color—must stand up under laundering test at 160 F. Retained chlorine—strength must not be affected because of damage from this cause.

The Avcoset Fabric Formulation. The basic formula is as follows:

1.0% Avcoset WS (cellulose

Note: Source of material covering the Avcoset program and use with fibers other than rayon is a paper presented before the First International Congress of Man-Made Textiles by Jackson A. Woodruff of the Textile Research Department, American Viscose Corp. TEXTILE INDUSTRIES presented an exclusive article on the Avcoset program by Mr. Woodruff and I. H. Welch, in the March, 1953, issue, pages 128-29, 131, and 133.

Stability for Wool Blends

ether)
10.0% formaldehyde (37% strength)*
2.0% sodium bisulphate (catalyst)
0.5% sodium sulfate water to volume

*Reactant SC (Quaker Chemical Co.) has recently been substituted for formaldehyde in cases where it is necessary to eliminate any odor problem.

This formula is usually added to, and sometimes varied, to achieve a particular hand and appearance of fabric, or to accommodate a certain construction. Some of these additives are: for firmness—polyvinyl alcohol; for dryness—colloidal silica; for a leathery hand—emulsions of rubberlike products; for increased resistance to tested abrasion—a lubricant.

The mixture is applied to well-scoured woven or knitted goods through a double dip immersion and squeezing in a pad with application of tension to stretch the goods about 5 per cent. Clip tenter drying at ½ inch over the desired final width follows at 240 to 275 F.

The next step is curing, which is usually done either at 330 F for 2½ minutes or 315 F for 5 minutes. This is followed by washing at low tension with a pH of about 9.0 and completed by drying at tensions varying with the residual shrinkage required.

Fibers Other Than Rayon. Shrinkage control is also effected in a wide variety of blends where the cellulose ether-formaldehyde treatment either stabilizes the rayon and therefore the entire fabric where it (the rayon) is dominant in the blend, or where the chemical treatment reacts favorably with other fibers. In the former instance, the other fibers include acetate, Acrilan, nylon, Orlon, Dacron, Dynel, etc.

Blends containing significant percentages of cotton cannot be Avcoset WS-treated because of the weakening effect on that fiber.

When rayon is in significant percentages in the blend (over 50 per cent) and an accompanying fiber can be stabilized by heat or some compressive method, the rayon must often be chemically treated to ensure a stabilized fabric.

The problem of color fastness to laundering is simplified in those fibers that are yarn manufactured in stock dyed form, particularly in the case of the dope-dyed, man-made group.

Most recent of these applications to fabrics other than 100 per cent rayon is exemplified in the use of this cellulose ether, Avcoset WS, as a base for stabilizing wool blends and is described in the following paragraphs.

Wool Blends. Frankford Woolen Mills in Philadelphia are now using the cellulose ether base formulation for obtaining stability in woolen blend fabrics. This was brought about by the growing market demand for machine-washable garments made from wool blended fabrics, particularly in the sport shirting field.

Although similar formulations are in use in a few other progressive plants on blends of approximately 50 per cent wool and 50 per cent rayon, Frankford is now putting it to use on blends containing 55 per cent reworked wool and down to 15 per cent rayon blended with other synthetics. The resultant hand is very desirable and control of shrinkage is held to 3 per cent or less.

Problems. During the normal course of wet and dry woolen finishing, fabrics are subjected to various stresses; as a result a finishing procedure which includes such mechanical operations as fulling, drying, decating, napping, and shearing is likely to leave the cloth with a residual shrinkage of from 5 to 15 per cent. To properly fulfill the requirements of machine washability, the last step in the finishing procedure must remove this shrinkage tendency and permanently set the fabric in that condition.

Work had been carried out at Frankford during the last five years with other stabilizing procedures but until the cellulose ether base formula was adopted, it was not possible to obtain the desired characteristics in the final fabrics.

The Ingredients. The padding mixture, because of the special nature of the particular fiber blend being finished at Frankford Woolen, has been altered from the more-used cellulose ether base formula for the treatment of rayon fabrics.

The following ingredients are used in the base cellulose ether formulation:

Avcoset WS
Reactant SC
Diglycolic acid
Zinc chloride

The modifying additives used to arrive at the proper hand and to improve strength, while currently producing satisfactory results, are being varied frequently for the purpose of discovering the best combination.

Procedure. The sequence of steps is the same as those used in stabilizing rayon fabrics: pad, dry, cure, wash, dry.

Cloth preparation required is a normal and efficient scouring. Minor changes in the amount of sodium carbonate left in the goods after scouring are insignificant; scouring off is not required.

The mixture of chemicals, depending on the hand required, is

Radio-equipped fork truck at Coats & Clark Toccoa, Ga., plant.

Have You Considered Using Two-Way Radios in Your Mill?

The integration of radio on fork trucks permits greater utilization of these vehicles and their operators and reduces any surplus of equipment to a minimum. Look at it another way. Most fork lift trucks are doing four hours work in an eight-hour shift. Not all of them, but many run empty in one direction for a load, and full in one direction with a load. A radio system can oftentimes reduce this deadheading from ½ to 1/3 by directing the fork truck through a triangular route; i.e., as the need arises a truck can return via another route carrying materials to another operation which is closer to the original work rather than deadheading all the way directly back to its prime work.

Here supervision of personnel is increased to the maximum when radio is installed.

In the manufacturing and assembly operation, you will find fork trucks will move more material per hour or per shift due to the decrease in time lost giving instructions. Drivers never have to return for instructions, nor do they have to move from their truck. Bells, buzzers, lights, etc., are eliminated so that other workers not concerned with materials handling functions are not disturbed. It is in this phase of materials handling that the use of an efficient radio system can usually reduce the labor and equipment force necessary.

Radio systems save money here because they make possible the use of the pooled system of vehicles by putting all the vehicles under control of one transportation department. The savings in trucks come from the use of the pooled system, and the pool system can be used effectively because of radio.

In some plants there has been a definite increase in the morale of foremen since they no longer have to wait so long for vehicles, thanks to radio.

Old Plants — Elevators. On the elevators in multi-story factories, if elevator capacity is limited, and it usually it, most elevators devote predetermined times of the day to various functions. Shipping schedules have been missed because elevator delays have been in excess of one full hour. These elevators can be equipped just as though they were trucks or fork lifts, and continued contact with the operator is possible with radio.

From an address by Harry G. Boyle, manager, communication field sales, Radio Corp. of America, at the recent Materials Handling Conference held concurrently with the 6th National Materials Handling Exposition.

Vacuum Cleaning for Spinning?

Although not perfected yet, vacuum cleaning on spinning frames is said to be under development, and considerable progress has been made despite inherent difficulties of the undertaking. About six inches is reported to be the maximum effective working distance between vacuum inlet and affected area.

made up in a 200-gallon tub, mechanically mixed, and piped to the pan of the pad. All ingredients are added to the mixture and applied to the goods by means of padding at this one time.

Drying and curing are performed on the shirting fabrics in the same machine; the first pass through the unit dries the goods at 250 F, set at a width one-half inch over the desired finished width; the second pass is for curing, which is done at 320 F for three minutes.

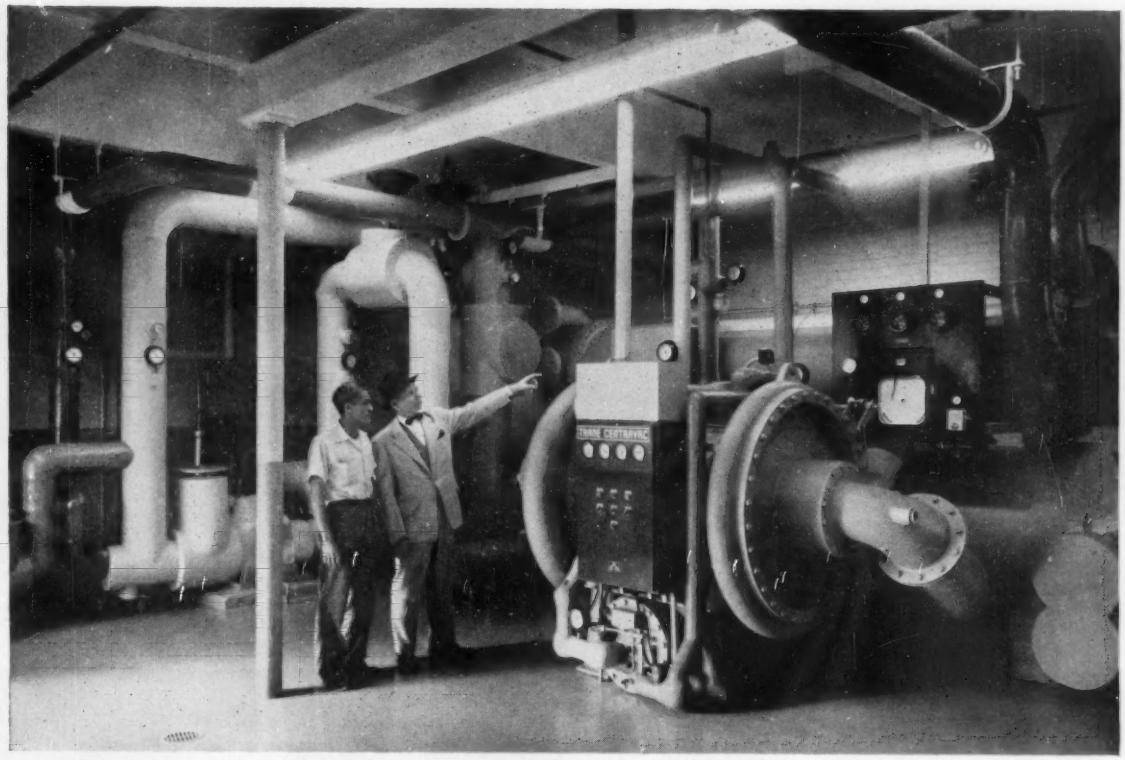
Washing follows in a dolly washer for 20 minutes, using a soda ash bath. The purpose of this washing is to neutralize the acid pH and to allow wet relaxation.

The last, and very important step of drying must be done in a relaxed state. This is done by overfeeding the goods into a pin box dryer.

Performance. Test results for this Frankford fabric, based on a 30-minute soap and water immersion at 105 F and expressed in percentage of dimensional change, are:

	Avcoset Fabric		Untreated	
	Warp	Filling	Warp	Filling
1st wash	—1.1	+0.8	—7.5	+2.5
2nd wash	—1.9	+0.3	—9.7	+1.1
3rd wash	—1.1	+1.1	—8.6	+2.2
4th wash	—2.2	+0.8	—9.2	+1.1
5th wash	—2.5	+1.1	—9.4	+1.1

Note: Test results for successive washings are cumulative and should not be added; figures for the 5th washing are total for the entire 5 washings.



REFRIGERATION is supplied by the 300 hp compressor shown here with auxiliary equipment and controls.

Excessive heat in summer and smoked yarn in winter no longer trouble the folks at A. M. Smyre Mfg. Co.'s No. 1 plant. It is now completely

AIR CONDITIONED

Staff Prepared
EXCLUSIVE

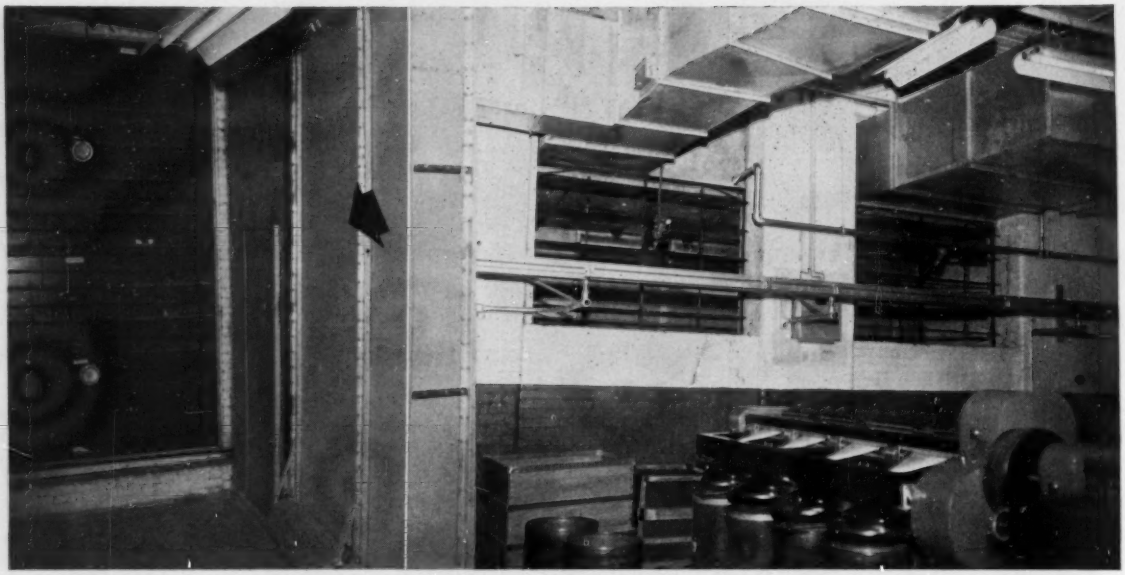
BLACK or soiled yarn (smoked yarn) in the winter months and excessive heat in summer, necessitating a 20 per cent reduction in operating speeds, induced A. M. Smyre Manufacturing Co. to install a completely new air conditioning and refrigerating system in its Plant No. 1 at Ranlo, N. C.

An estimate of the saving to be effected by the use of the existing air handling, humidifying, and heating equipment was made, and it was found that the cost of adapting the existing system to vacuum scavenger return, electrostatic cleaning, automatic air filtering, and refrigeration was practically the same as the cost of replacing the entire system. In addition, use of the existing equipment would still leave the problem of free moisture within the room, lack of proper zone control, and lack of adaptability to false ceiling installation.

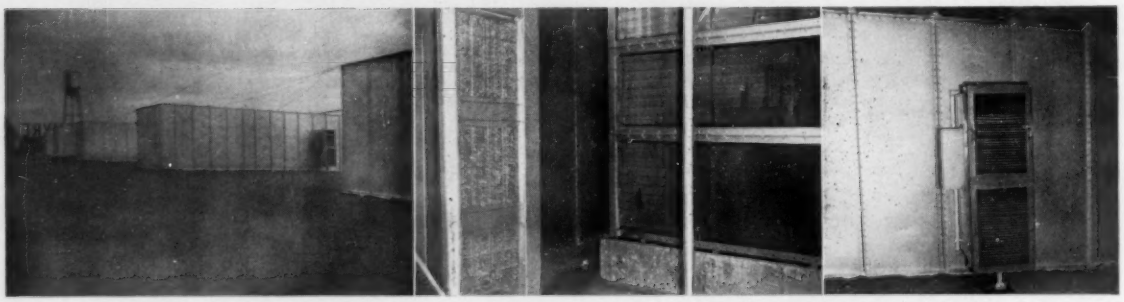
This mill selected a central station air circulating system for the card room and five individual stations for spinning and winding operations. DeParx Stimson, Engineers, Winston-Salem, N. C., studied the problem and recommended and designed the new system which was installed by the Bahnson Co.

Controls used are by Johnson Service Co., refrigeration by the Trane Co., automatic air filters by American Air Filter Co., and insulated-panel apparatus by the Bahnson Co.

This system is unusual in its adaptation of electrostatic cleaning for control of stained yarn, positive



AIRMAT FILTERS CARD ROOM AIR before entering air washer preparatory to recirculation (left). Note recirculation dampers or louvers on left. Air outlet for card room (right). Louvers are automatically controlled by air pressure.



FIVE SEPARATE UNITS FOR SPINNING (left) are mounted on roof in small metal housings. Center: cooling coils for spinning area. Note electronic air cleaning unit at left. There are five of these small housings for spinning area equipment. Right: electronic air cleaners are mounted on roof to serve units conditioning the spinning areas. Air cleaning equipment has eliminated sooty yarn in this mill.

control of both temperature and humidity at any point through such a wide range, large number of positive zone controls, control of condensing temperatures through the entire range of the refrigeration machine, 100 per cent automatic control set up for year round conditions either operating or shut down, air cleaning features, air return feature, and closed chilled-water circuit—all in one compact installation.

The card room is on the first floor level, therefore the central station was less expensive to install because a minimum of new building was necessary to house the equipment. Also only half as much air was needed in this area as compared to the spinning and winding areas.

Individual stations in the spinning and winding areas permit continuous operation even if a unit should become inactive. The equipment required no major structure for housing, being sheltered in small metal enclosures mounted on the roof. The cost of this installation was much less than additional central station capacity for the area.

A total of 340 tons of refrigeration is available at 42 F water temperature to supply both the central station and the individual units in the spinning area.

Air Cleaners. Electrostatic air cleaners filter all outside air taken into the system serving the spinning and winding areas. This feature has stopped trouble with black or sooty yarn.

The air filters serve as effective lint collectors in the card room and spinning room. These cleaners filter air through a roll of porous paper which automatically winds onto a roller as it becomes clogged or loaded with lint. Working in conjunction with the electrostatic air cleaners, these filters assure clean air in the manufacturing areas, thereby effecting an improvement in cleanliness and hence better quality yarn.

Better Morale. Refrigeration has improved employee morale and comfort in the summer months and has permitted high operating

speeds the year around. There is a 20 per cent increase in operating speeds in the summer months, since the usual speed reductions at this time of year are eliminated. The work runs much better during the summer months, employees remain in better spirits, and quality and efficiency are much improved on an over-all basis.

Humidity is more uniform in the circulating air, thereby preventing rusted machinery which was formerly caused by localized excessive moisture, leaky pipes, and condensation.

Card Room Operation. A large fan blows raw air into the card room through paper air filters, through cooling coils, and through ducts into the card room; dampers open to admit air back to the fan for recirculation along with a portion of fresh air.

Operation in Spinning Area. In principle, the system in spinning works the same way except that all outside air enters through the electronic air cleaners. Exhaust air from the Pneumafil system on SG-1 spinning frames is recirculated after lint has been filtered out. A total of 41,346 square feet of floor space is refrigerated in this plant.

A Trane Centravac Model 300 compressor operates on 550 volts to cool 1069 gpm of water from 53.3 F to 45 F when supplied with 1088 gpm of 85 F entering condenser water.

The fan for the card room handles 50,000 cfm. There are five fans for the spinning and winding areas. Capacities of these are 31,200 cfm; 28,900 cfm; 20,700 cfm; 20,700 cfm; and 20,700 cfm.

There are four spray-type humidifiers installed on the roof of the spinning area and one for the winding area.

Knit Goods Shrinkproofing Dependent on After-Curing Wash?

None of the resins at present used commercially to stabilize knit goods are particularly effective, at least without an after-curing wash, according to tests made at N. C. State College School of Textiles, and reported by Roger L. Pruitt at the annual meeting of the Underwear Institute. The tests showed a fairly large variation in the amount of shrinkage protection given by the various resins, with the greatest shrinkage occurring in the direction of the wales.

The resin which affords the highest degree of shrinkage protection has a lower breaking strength than a resin which is not so good in preventing shrinkage. Resins tested included urea-formaldehyde, methylated melamine, modified urea - formaldehyde, modified methylated melamine, and methylated urea-formaldehyde. All were applied according to manufacturers' recommendations, except for the omission of the after-curing wash.

Features of the Air Conditioning and Refrigeration System at A. M. Smyre Mfg. Co. Plant No. 1

The new system features the following operational advantages:

► Electrostatic cleaning in the spinning and winding areas for the removal of all staining contaminants in the air, resulting in the total elimination of smoked yarn.

► Ability to maintain any inside relative humidity, up to and including 70 per cent RH, without the use of supplementary evaporation or free moisture within the room.

► Automatic filtering of lint and dust from the air before taking it through the conditioning apparatus.

► Positive control of humidity at any point between 40 per cent RH and 70 per cent RH, by the mere adjustment of controls.

► Positive control of temperature (within each zone) at any point between 76 F and 90 F, by adjustment of controls.

► Positive and complete control of conditions for each block of 12 spinning frames, for the winding area, for the area over cards, for the area over combers and slubbers, for the opener room, and for the picker room.

► Incorporation of an air distribution system suitable for adaptation to a false ceiling.

► Booster return system from Pneumafil equipment to the air conditioning systems.

► Completely automatic refrigerating system, requiring no manual start up or shutdown, and capable of operating satisfactorily at any capacity from 10 per cent to 100 per cent of the capacity of the machine. The condenser circuit on the refrigeration equipment is equipped to enable the cooling tower to operate under any outside conditions. It includes minimum tank temperature control, condenser water bypass, and step-control on the operation of the two cooling tower fans.

► Overall control center which determines whether the system is operating on heating or cooling, and enables any one zone to determine the operation of the system in the capacity required.

► Complete three-way modulation of capacity on each of the air washers, with a common pump supplying all water to air washers.

► Three-way modulating of two chilled-water circuits on each conditioner, for positive control of temperature and dehumidifying at any point throughout a wide range of selected conditions.

► Completely closed chilled water circuit, assuring long operation without need for cleaning the chiller.

► Shut-down control selector, at each zone, to enable the complete shut-down of the equipment in a given zone when not in operation. This selector brings into play a separate thermostat and humidistat, set to maintain minimum conditions for shut-down periods. When conditions within the zone change to a point beyond the shut-down setting, the instrument affected starts the fan and brings into play the necessary conditioning components to satisfy the condition in that zone; as soon as the condition is satisfied, everything, including the fan in that zone, shuts down.

► Mounting of all top floor equipment on the roof of the mill.

► Insulated-panel construction of all exposed apparatus, eliminating the necessity of housing the equipment.

► Provision of insulated-panel return ducts for the future installation of an under-the-floor return system.

► Inclusion of an emergency control selector for throwing the system over to evaporative cooling in the event of refrigeration failure.

► Since the entire system of controls is automatic, necessary interlocks are provided to prevent the operation of any component when another component, upon which its operation is dependent, is inoperative.

Loom fixing tips and causes of

Weaving Defects

By Clyde O. Cronic
EXCLUSIVE

The author of this series has had years of experience in producing quality goods. Although his articles pertain primarily to cotton weaving, much of the information will be of value to weavers of other fibers. The series should be especially helpful to mills equipped with looms of models Modified D, XD, X2, E, and L.

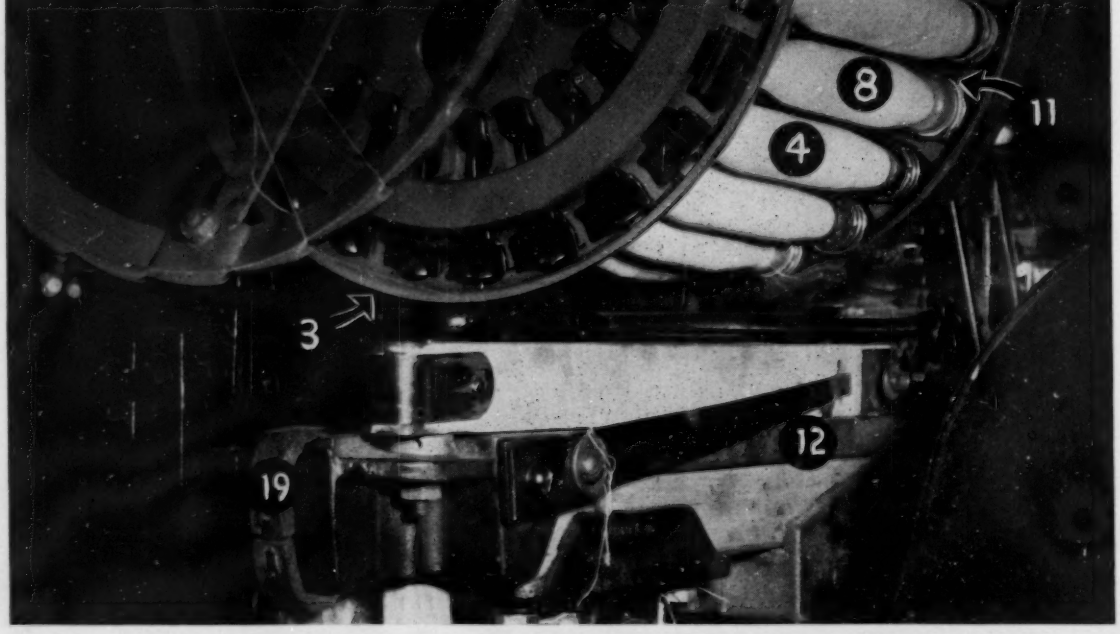
Part 3*: Causes of Quill Break-Outs

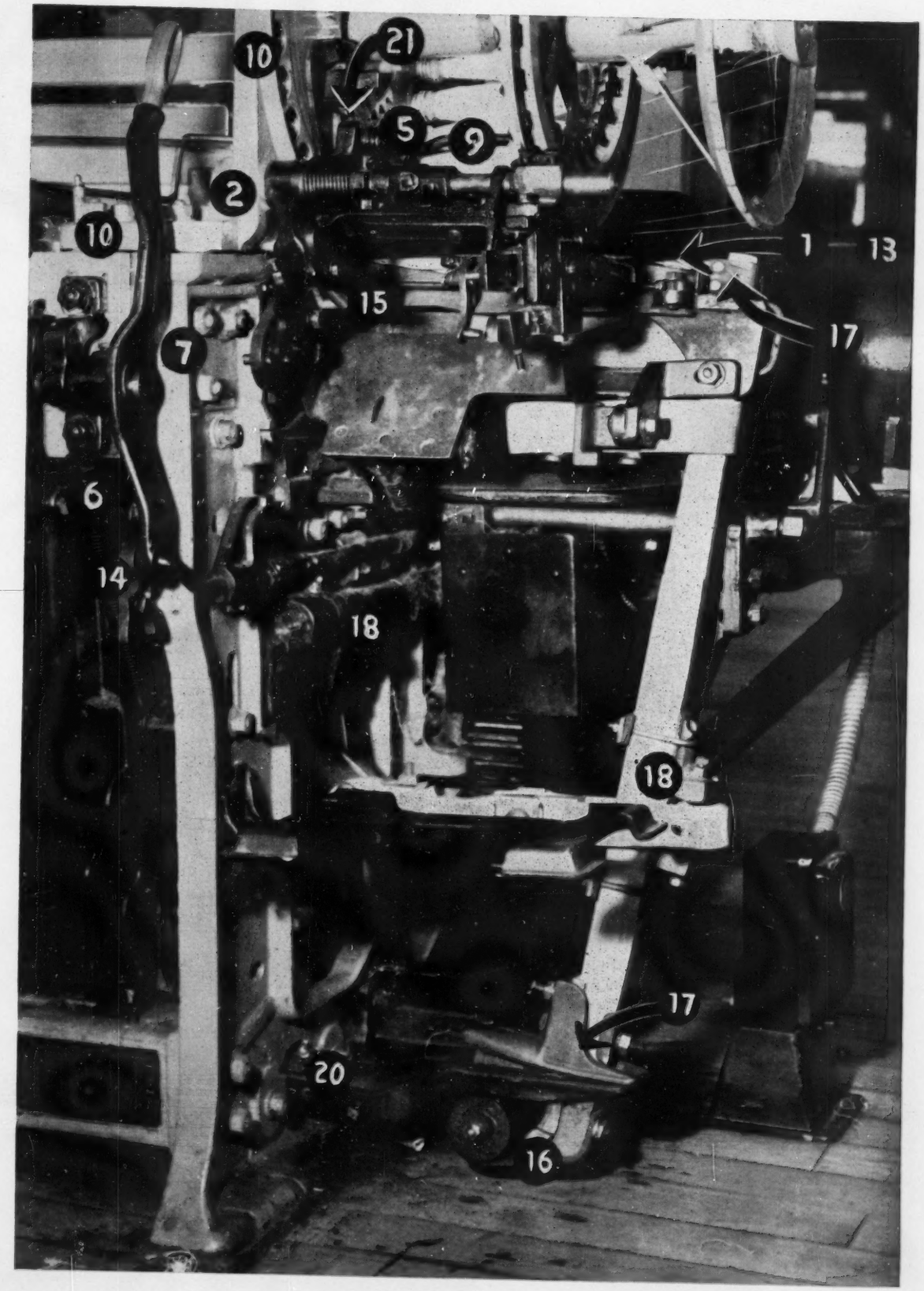
1. Shuttle going too deep in box.
2. Battery not gauged with lay.
3. Bobbin support not adjusted properly.
4. Bad quill.
5. Worn transfer hammer.
6. Shuttle feeler not protecting.
7. Loose breast beam.
8. Quills too full for shuttle.
9. Bent or broken transfer fork.
10. Battery disk loose or out of line.
11. Battery not turning.
12. Broken lay end plate under battery.
13. Shuttle not boxing properly.
14. Weak spring on feeler.
15. Latch finger not set correctly in relation to bunter, or worn latch finger.
16. Heel strap broken.
17. Picker not parallel.
18. Too much or too little power on loom. Loom picking late.
19. Lay end strap too thick.
20. Worn rocker shaft or bearing.
21. Feed pawl failing to turn battery.

The following causes of quill breakouts are not shown in the photographs.

22. Shuttle spring too tight or too loose, or broken.
23. Loose crank arm or crankshaft bearing.
24. Filling cam timed late.
25. Worn bunter.
26. Loose sword.
27. Battery not oiled.

*Part 1 (Causes of kinky filling) and Part 2 (Causes of warp threads cut by temple, buttonhole selvages, corded selvage, stringy selvage, doublings in filling, and oily warp threads) appeared in the May and June, 1955, issues.




10
21
5
9
2
10
1
13
15
17
7
6
14
18
18
17
20
16

MERCHANDISING

Sales development as a

NO. 7 OF A SERIES — EXCLUSIVE

WHETHER one chooses to call it sales development, market development, new product development, or what have you, the fact remains that one of the most important areas of any company's continued growth involves the development of new markets for existing company products and the development of old and new markets for new products. Usually this responsibility rests with the merchandising department, rather than the sales department, which should be fully occupied with the performance of daily service to customers using existing products in current markets.

How Sales Development Gets Started. Any alert, aggressive company is constantly looking for areas of growth potential as well as to the continued maintenance of existing productive capacity, should current markets shrink for one reason or another. This is particularly true in the fashion areas of distribution in the textile industry, where full operation of expensive plant and equipment installations depends to such a great extent on style, weather, seasonal factors, and the temptation to anticipate these conditions which so often causes severe market fluctuations.

It is now becoming more true in the area of industrial textile operations where fabric development and the technology of new fibers are combining to increase service life and performance in use, thereby reducing replacement markets.

The merchandising department, aware of these conditions in the distribution of most textile products, is generally charged with the responsibility of planning systematic determinations of goods and services to be sold and for providing long range schedules of production to manufacturing. Therefore, if merchandising executives are alert, they are constantly conducting market research investigations, not only with their direct customers but with their customers' customers, in an effort to anticipate any conditions that will result in surplus productive capacity. The development of such information usually involves going further along in the chain of distribution than the purchasing people with whom the sales department is conducting daily business.

If a serious long term recession of distribution in any market is indicated, then new markets must be found for the company's products in order to keep plants going. Development of such markets must be preceded by a market survey of the potential area of distribution, including such factors as a study of the product that is to be replaced or supplemented, as well as factors of relative performance, economics, service, and growth on a long term basis.

If the survey indicates that conditions are favorable, then the merchandising department may often have to work with research and manufacturing to see whether any minor modifications in the existing product are needed to satisfy the new market. The sales department must be consulted to make certain that they are equipped to service the new area of distribution when it is developed. Sales and merchandising must also decide how much distribution they will transfer from the old to the new market.

Whether or not market research indicates possible future loss of present distribution, an alert merchandising organization is constantly looking for new products that the company

Make only what you can sell!

function of merchandising

might ultimately manufacture. These products very often might be replacements for, improvements over, or supplements to present production in current areas of distribution to maintain the company's position against competition. Very often the development of a new product will take the company into an entirely new area of distribution.

In any case, after a market has been ascertained for a new product, a program must be set up by the sales development group in conjunction with research, manufacturing, and potential new customers before the product is turned over to the sales organization.

Where Customer Relations Begin. The early impressions on the customer which are made by the sales development department will have a decided effect on the future potential of the product. At this point, the development man briefly functions as a salesman, technician, liaison man, and above all, if a new customer is involved, as the first representative of his company's management. His behavior, as well as the performance of his new product, is going to come in for a lot of close scrutiny and examination, and an awareness of the problems to be expected might make the job easier.

Picking the Starting Point. A new product cannot be successfully merchandised with a scattergun approach. After examining the market in relation to the product, a choice must be made as to one or more starting points. The development of the product with each customer is going to be a problem in itself and it is well to anticipate the fact that unforeseen difficulties relating to that particular customer will more than likely arise at some stage in the evaluation. Since these complications will undoubtedly result in additional trials due to product improvement and modifications, it is well to understand in advance the effect they will have on customer acceptance and the relationship of the companies involved.

If development in the early stages involves many unknown factors it is often desirable to work with a small customer. The large organization usually has a difficult time scheduling product trials and is apt to lose interest soon if one or two of the early trials fail. The smaller customer, where owner-management often exists, affords a closer link to the scene of action and usually permits easier access to observe the product in operation.

On the other hand, if management feels that enough is known about the product and its performance to assure its ready acceptance, then by all means it should be taken directly to the most important potential user. The product should not be given to so many customers that it is not physically and technically possible to follow each evaluation to conclusion. It is well to remember that unnecessary delays cause loss of interest and enthusiasm on all fronts. Leaving such development programs suspended for lack of attention can do more harm than good and may close the door for future development work another day.

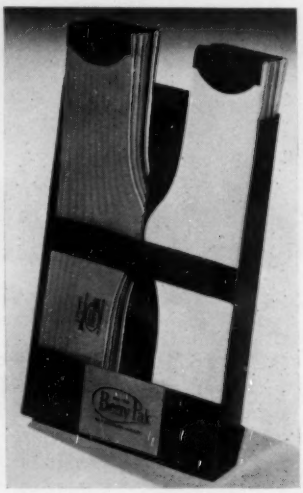
What the Customer Wants. In order to be of immediate interest a new product must show a savings in cost or an improvement in performance over the item that is in use. There is no reason for optimism about the development of a new product unless there is a plus contribution to one or both of these factors. Sales development should be prepared to answer these ques-

First Award Winners in Packaging Competition

ACETATE LID on oval shaped box attracts attention as "out of the ordinary." Blue-green background color for a gold and white design also printed on the acetate lid makes a magnetic combination.

PROTECTS MERCHANDISE from being disarranged and counter tossed, yet permits maximum visibility of product. Gay colors of socks stand out well against glossy box wrap. Display message informs buyer that in this new packaging method one pair of socks is mounted on each board.

The 81 winners of the 5th Annual Packaging Competition, sponsored by the National Paper Box Manufacturers Association, went on display last month at the Association convention in Atlantic City.



Apparently ever-conscious of Mr. and Mrs. Consumer, the judges this year picked more "hard selling" packages and fewer unusual surface designs for winners. They also gave the nod to more multiple-sales-unit packages with more "family" designs in the final selection. Such sales helps as product complimentation, brand identification, package inserts, and contents listings were praised by the judges.

Watched by both package and product manufacturers for future packaging trends, this year's contest, according to the judges, revealed that the package as a self-service sales entity has reached new highs. As one judge put it, "The important ingredient in packaging is how

tions before trying to sell the potential customer on the idea of trying the product.

It is well to remember that trials take time, interrupt the flow of routine work, and cost money, even if the product is given away. If there is no way to predetermine the cost of the product or its performance in relation to competition without a customer evaluation, then it is a good idea to be frank in admitting it. In such cases, a more healthy situation is usually generated if one not only offers to supply a small amount of the product for trial on a gratis basis, but if one offers to share in the cost of fabricating and analysis as well. Good long-term customer relations are not promoted by sales development people who encourage customer expense in the evaluation of questionable products that may never be commercially produced.

Know the Product. One must remember that the potential customer does not know about the new product. His early impressions will be formed largely by how well the sales department representative is informed in this respect. One should be prepared to tell him about the item as briefly as possible without notes. If there are any technical data available they should be sent later. The customer's willingness to try the product will largely be influenced by his impressions of the way in which the representative handles himself.

Know the Competition. One should learn as much as possible about the competitor's product. Sales development men should be prepared to discuss briefly the comparative laboratory and field test results on both products. It is best to stick to the facts and leave out personal opinions of the competitor and his product. One does not really know what customer relations and experience are with the competitor and his product.

Know the Customer's Markets. One should try to learn as much as possible about the customer's markets without being offensive to him. It is not a good idea to try and impress him with what one knows, but it is well to develop an understanding of the customer's problems so that the product can be discussed more intelligently in relation to its end-use.

If one wants to learn about a customer's markets, it is advisable to be forthright in asking him for an education. One who pretends to be an expert is easily detected and promotes distrust. Very few of us are so expert in our fields that we do not continue to learn more as we go along.

The Value of Integrity. One should remember that seller and customer are sharing each other's confidence in cooperative evaluation of the product. The seller is in a much more delicate position than the customer is, however, since the

well the package says *buy me.*" Another advised product merchandisers to carefully analyze their package in the light of today's competition on the "5-foot shelf—that 60-inch eye level, proving ground in super sales outlets where the customer meets the product eye-to-eye."

The Cannon towel gift box shown in the accompanying photo received the first award in textiles. It was manufactured by Old Dominion Box Co. for Cannon Mills Co. Another Cannon towel gift box won the second award in textiles.

The men's hosiery display box shown here won first award in hosiery and wearing apparel accessories and second award in best display box. It was made by Cherokee Paper Box Co., Inc., for Wisteria Hosiery Mills, Inc.

A sheet and pillowcase box set and a baby blanket box received honorable mention in textiles. They were manufactured for Bates Fabrics, Inc., and Weil Mfg. Co. respectively.

New York Cotton Exchange Announces Proposed Contract Changes

The Board of Managers of the New York Cotton Exchange has adopted the following changes in its contract for the future delivery of cotton:

The new contract will provide for a basis staple of one inch, whereas the current contracts are basis 15/16 inch staple. However, the grade basis of "Middling" will remain the same.

The proposed change will eliminate the delivery of 7/8 inch staple cotton on contract. Currently, this is the shortest staple length that may be delivered. The minimum for the new contract will be 29/32 inch staple.

It is proposed that the premium for 1 1/32 inch cotton will be increased to 100% of the commercial differences over one inch quoted at the designated markets, and that the premium for 1 1/16 inch cotton and longer be fixed at the full premium for 1 1/32 inch plus 75% of the difference between 1 1/16 inch and 1 1/32 inch staple. These compare to a premium equal to one inch plus 50% of the difference between one inch and 1 1/32 inch staple on the delivery of 1 1/32 inch and longer staple under the terms of the current contracts.

The new contract will provide for a Micronaire test reading of 3.5, which compares to a reading of 3.3 on deliveries beginning May 1956.

The foregoing changes are all subject to approval by the members of the New York Cotton Exchange and are being submitted to them immediately for their consideration. If approved, the changes will become effective beginning with the October 1956 contract, and the current contracts will expire in September 1956.

former may be doing similar work with other customers who are competitors of the latter. When the product is established one hopes to be selling it to many competing customers and the respect and good will of all of them must be earned and maintained.

Too many lasting irritations are the result of indiscretion on the part of sales department men who trade information and know-how from one customer to another.

If industry-wide use is to be made of any joint knowledge developed in evaluating a new product with a particular customer, then the customer should be made aware of these intentions at the start. If a customer is under the impression that joint conclusions based upon his evaluations are for his use only, the seller may find himself in the very embarassing position of having to choose between the loss of an idea or the loss of a customer. Early recognition of such possibilities and a thorough understanding and explanation of intent will usually avoid such problems.

Take a Realistic Approach. Many sales development programs will prove unsuccessful despite the original enthusiasm and optimism which may have greeted the project on all fronts. Very often one may find that a product suitable for one customer cannot be used satisfactorily by another customer who is fabricating the item for the same end-use. Standardization of product for efficiency in the seller's plants may not permit making many minor and major modifications requested by every customer for use in the latter's particular installation. It is assumed, of course, that efforts will be made by manufacturing and research to correct any general limitations found in the product before commercial acceptance is assured.

If it is not possible to improve the product for general industry acceptance, or to modify it to meet the needs of a given customer, then the facts should be recognized and presented to management as quickly as possible. Sales development people must guard against the temptation of being carried away by the emotional visions of success which often cloud the facts that prove otherwise. Realistic management will not tolerate attempts to make wrong look right either in their own organization or in the customer's.

The Never-Ending Job. After sufficient quantities of the new product have been run to assure a sound commercial product in the seller's plant and continuity of consumption by the customer, the sales department takes over the distribution of the product and the handling of the account.

If management is alert and aggressive, the sales development department will immediately have many new areas of product and distribution to be investigated and developed.

Take the hard work out

THE DESIGNING of Jacquard woven fabrics frequently involves much tedious and time-consuming work in painting the various weaves on design paper. While some of this is unavoidable, there are many ways by which the cards can be cut without requiring *all* of the weaves to be elaborately inserted on the design.

In the interest of reducing the cost of designing, as well as increasing the number of patterns that can be developed, every effort should be made to adapt and use the various methods of design simplification that are available.

Most public card cutters are accustomed to designs made in this manner. It may be found that some mill card cutters will require a certain amount of training and experience in cutting on simplified designs. Once they have mastered the techniques involved, however, they will prefer these methods, their work will contain fewer errors, and their productivity will also increase.

In view of the many different kinds of fabrics woven on Jacquard looms, this article merely attempts to outline some of the basic rules for the simplification of Jacquard designing. These rules may then be applied to almost any problem that may be encountered.

It will be noted that, generally speaking, instead of the weaves being fully painted on the design and simply cut as painted, the design itself will have less detail shown and the actual card-cutting will be done more from written instructions and small portions of the weaves desired. The card cutter, by memorizing these instructions or that portion of them which particularly applies to the section of the design on which he is then working, will quickly learn to translate large washes of color on the design into the individual weaves that these colors represent.

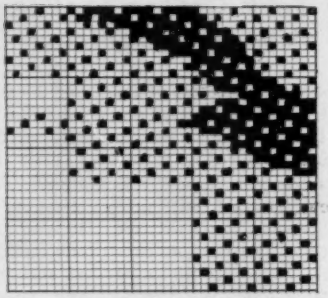


FIG. 1. Portion of a design using a 5-harness satin weave for both warp and filling. Note that ground weave is painted around the edge of the figure only. This was done to make the designer's job easier. An experienced card cutter knows that he is to continue the ground weave throughout the blank or unpainted areas of the design.

Note: This design, as well as the others reproduced to illustrate the points brought out in this article, was prepared accurately but quickly to save the designer's time—just as designs are made everyday in the mill. Therefore, the squares are not filled in evenly for "beauty" as they would be if intended for use in a textbook.

Some of the methods that may be employed in simplification of Jacquard designs are illustrated:

Insertion of Weave Around Figure Edges Only. Fig. 1 shows a portion of a design using a 5-harness satin weave for both warp and filling. The ground weave is painted around the edge of the figures only, it being understood by the card cutter that he is to continue this weave throughout the blank spaces of the design paper. Where the figures are small the complete weave is indicated; on large portions of the figure, the same principle of painting only around the edge is followed.

Since this design is intended for a fine index Jacquard, the satin weave should be inserted so that it provides a start of one full row of 16 hooks in all places at the edge of the figure. Five full rows of 80 hooks are required to obtain a complete repeat of this weave on the rows of a fine index Jacquard, but a start of one full row should be sufficient.

A certain amount of proficiency on the part of the card cutter is required to handle this. However, this proficiency may be readily acquired, and a great deal of tedious designing work can be eliminated by painting designs in this manner.

Cutting Plain Weave from Instructions. Fig. 2 shows a portion of a design with a plain weave figure and an 8-harness satin weave ground. It will be noted that the figure is painted in solid black paint with no weave indicated. Cutting instructions accompanying this design were:

> Cut Paper solid
> Cut Black on odd hooks only on odd-numbered cards, even hooks only on even-numbered cards

This particular design was

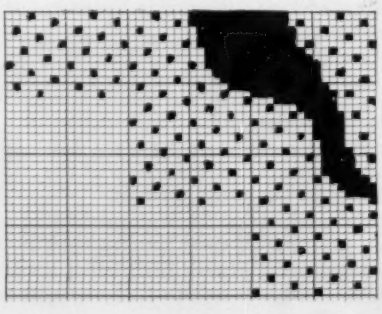
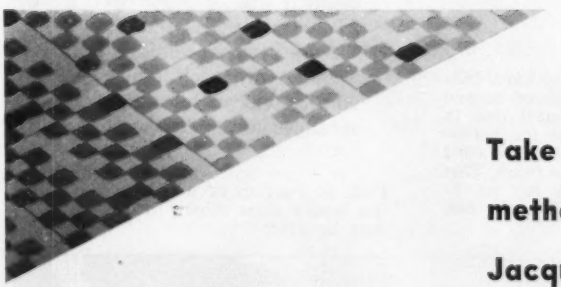


FIG. 2. Portion of a design with a plain weave figure and an 8-harness satin ground weave. Note that the figure is painted in solid black with no weave indicated. Simple instructions accompanying the design tell the card cutter that figure is a plain weave—another way for the designer to save time.

# of Jacquard Designing



By Osbert Hughes

EXCLUSIVE

Take time out and read here some of the methods at your disposal for simplifying Jacquard designs and reducing their cost.

painted in two color effects only, black and paper, as the 8-harness satin interlocks with plain weave. However, if weaves had been used that do not interlock with plain weave, it would have been necessary to paint the plain weave figures in a different color than that used for the ground weave. For instance, if the design of Fig. 2 had been planned for a 5-harness satin ground weave, it would have been necessary to paint the plain weave figure in a different color—say red—and paint the 5-harness satin in black. The card-cutting instructions would have then read as follows:

> Cut Paper solid, miss Black
> Cut Red on odd hooks only on odd-numbered cards, even hooks only on even-numbered cards

It is of course entirely possible to produce a plain weave by cut-

ting odd hooks on even cards and even hooks on odd cards, but the reverse is usually regarded as being somewhat easier for the card cutter to memorize.

Cutting Weaves from Slips. Frequently designs from which all weaves have been omitted can be prepared, the various weave effects being obtained by painting each in a different color. The weaves wanted are then painted on a piece of the same paper as that used for the design, this usually being called a "weave slip." These weave slips are ordinarily made one row wide, this row being either 8 or 12 hooks if a French index, or 16 hooks if a fine index Jacquard is used.

FIG. 3. Weave slips for plain weave (left), 1x3 twill (center), and 8-harness satin (right). These were used with the design of a fabric having an 8-harness satin warp float ground and figures in both 1x3 twill and plain weave.

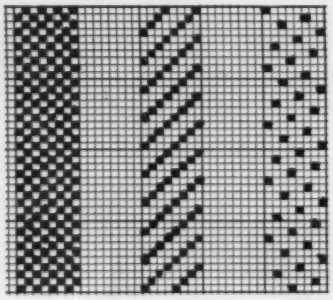
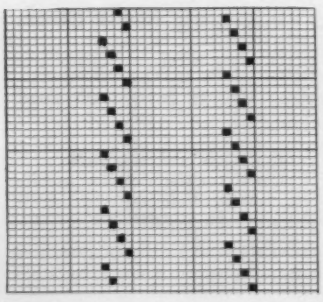


FIG. 4. One of two ways for making weave slips where condensed designs are utilized. A section of the weave (in this instance a fabric with an 8-harness warp float ground) is painted on a slip containing one-half the number of hooks in a full row. Note the two slips —one is used for cutting the odd numbered hooks and the other for the even numbered. See Fig. 5 for another way to do this.



Some weaves require more than one row to make a complete repeat. The weave slip is extended over a sufficient number of picks to make it easy to handle by the card cutter. Care should be taken to ensure that the weave repeats an exact number of times in the length of the slip.

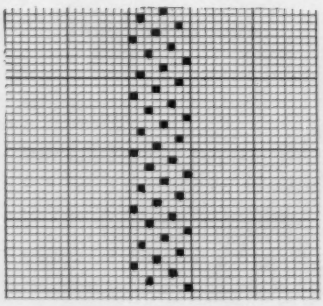
Fig. 3 shows weave slips for plain weave, 1x3 twill, and 8-harness satin. These were intended for the design of a fabric using an 8-harness satin warp float ground and figures in both 1x3 twill and plain weave.

The design could have been painted with the ground as paper, the twill figures in yellow, and the plain weave figures in red. The card cutter must memorize the weaves on the slip as they show for each card. The card-cutting instructions would have read as follows:

Cut Paper 8-harness satin
Cut Yellow 1x3 twill
Cut Red plain weave

It should again be noted that some weaves will not repeat on one row of the card. For instance, the design just described might have been intended for a 600-hook French index Jacquard, which has 12 hooks per row. In this event it would have been necessary to make a weave slip showing the 8-harness satin painted on two rows, or 24 hooks. This would mean a little more care in memorizing on the part of the card cutter, but this is by no means beyond the capacity of the average operative.

FIG. 5. Experienced card cutters favor this type of weave slip over the two-unit one in Fig. 4. It eliminates the necessity for putting each card through the machine twice. This is the weave slip for an 8-harness satin, just like the one in Fig. 4.



It is more difficult to use weave slips when the number of hooks in the Jacquard are not a multiple of the number of hooks in the weave. This condition sometimes occurs and always presents a certain amount of difficulty to the designer in "breaking" the weave in those portions of the design where the break will be the least conspicuous.

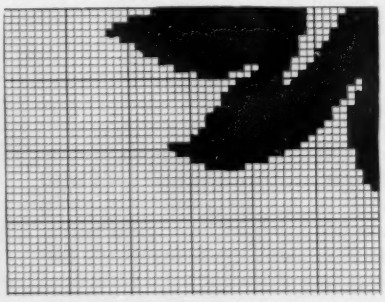
For instance, if a Jacquard tie repeats on 624 hooks (which is the full capacity of the machine) and the ground weave is a 5-harness satin, it would usually be found best to paint in the satin weave at least around the edges of the figure. The weave slips of 1x3 twill and plain weave could still be used as previously described.

Some designs might permit the use of two weave slips. to apply one to one section of the ground and the other slip to another section, each separate section being indicated on the design by different colors of paint.

Naturally it is not possible when using weave slips to "lock" the warp and filling weaves together by transposing one or the other in the suitable places. When this is required, it is necessary to paint the various weaves at least around the edges of the figures and arrange the locking together at that time. However, it is not always necessary to lock the weaves together, especially in fabrics with high sley and picks; and in this event it will be found well worthwhile to use weave slips.

Some weaves combine naturally to lock into each other, and the various weaves on a slip should be arranged to take advantage of this

FIG. 6. Portion of a design for which the weave slips shown in Figs. 4 and 5 may be used.



feature. The weave slips shown in Fig. 3 were arranged to lock together in this manner.

Condensed Designs. Thus far, simple one-warp and one-filling fabrics have been considered. For these the design is usually painted so as to cut one hook per warp end and one card per pick. The design paper is selected according to the proportion of sley to picks. For example, for a fabric with 96 sley and 48 picks a 12x6 or 16x8 paper would be used, depending on whether the Jacquard is French or fine index.

However, with certain weaves it is entirely practical to paint the design on one-half the number of hooks used and then cut two hooks on the card for each single hook painted on the design. This changes the size of design paper required, so that the 96x48 construction can be designed on either 8x8 or 12x12 paper. For this type of designing each weave is painted in a different color, with the ground weave usually left as paper.

The card cutter rules the design according to the type of Jacquard, with 4, 6 or 8 hooks representing one full row on the card. By cutting two hooks for each hook painted and using properly adjusted weave slips, the design will appear in the cloth exactly the same as though it had been painted on the full number of hooks.

This method provides a considerable saving in the cost of making the design, as the actual work of designing involves painting only one-half of the number of hooks used and the weaves need not be inserted. Also, the square, or almost square, design paper used is much easier to work on than the unequal paper called for by many cloth constructions.

There are two methods, either of which may be used, for making the weave slips for cutting this type of design.

One way is to paint a section of the weave on a slip containing one-half the number of hooks in a full row. This is shown in Fig. 4 for a fabric with an 8-harness satin warp float ground. Note that two weave slips are required for each weave used in the fabric. The card cutter uses one slip when cutting the odd-numbered hooks and the other slip when cutting the even-numbered hooks.

The other, and probably the best, method consists of making only one slip for each weave. The cutter then has to visualize and cut two hooks for each hook painted on the design, and he has to apply the proper weave from a slip to each color painted on the design. The weave slip for 8-harness satin according to this method is shown in Fig. 5, while a portion of a design for which the slips in either Fig. 4 or Fig. 5 can be used is shown in Fig. 6.

This same method of condensation may be employed for single-shuttle fabrics which have a two-color warp drawn end-and-end. The design is painted on one-half the number of hooks used, and each weave effect is represented by a different color of paint applied in solid masses, each weave being cut from a separate weave slip.

When several colors are painted, some card cutters frequently put each card through the machine twice, cutting the odd hooks only on the first trip through and the even hooks only on the second trip. Cutters occasionally remove the unwanted keys from the card-cutting machine to avoid possible errors caused by striking the wrong key. Care must be taken in painting the weave slips so that all weaves fall into their proper place.

The method shown in Fig. 5 is that usually favored by the more competent card cutters. When using the complete weave slip it is not necessary to put each card through the machine twice, cutting odd hooks on one trip and even hooks on the other. It is recommended that all card cutter trainees be taught to read and cut a design in this manner as early in their training period as possible.

One Warp and Two-Shuttle Fabrics. This type of fabric, in widely varying constructions, forms the basic design for damasks, bedspreads, blankets, dress goods, drapery and upholstery, and many other fabrics. Frequently the fabric will have one shuttle running throughout, with the other shuttle being changed in color at certain

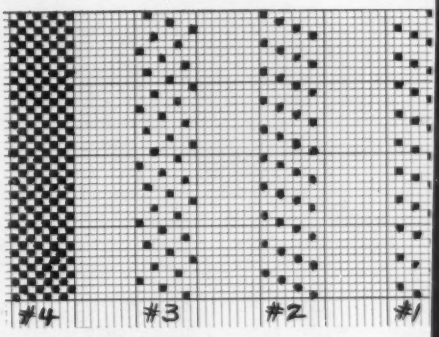


FIG. 7. Weave slips used for a pick-and-pick damask fabric with an 8-harness warp satin ground weave, 8-harness filling satin figures, the back of each filling figure being plain weave.

intervals; although from the card-cutter's viewpoint these are to be considered as two-shuttle fabrics. This fabric may be woven on either a 4x4 box loom with the shuttles alternating pick-and-pick, or on 4x1 box looms with the shuttles alternating two picks of one color with two picks of the other.

The design for a two-shuttle fabric is usually cut by reading for two cards from each individual line of the design. Therefore, in calculating the design paper—for example, for a 96x48 construction —the design paper used should be 16x4 or 24x6. Certain weaves may have to be painted on the design, but most weaves may quite handily be cut from weave slips.

These fabrics are frequently made with some type of warp satin as a ground weave and filling floats in varying lengths to form the figure motifs. Fig. 7 shows the weave slips to be used for a pick-and-pick damask fabric with an 8-harness warp satin ground weave, left as paper on the design, and 8-harness filling satin figures, the back of each filling figure being plain weave. If one shuttle were indicated in red paint on the design and the other in yellow paint, the card cutting instructions would have read as follows:

Cut 2 cards from a line

1st. Card (Red shuttle)	Cut #1 slip on Paper
	Cut #3 slip on Red
	Cut #4 slip on Yellow
2nd. Card (Yellow shuttle)	Cut #2 slip on Paper
	Cut #3 slip on Yellow
	Cut #4 slip on Red

(Continued on next page)

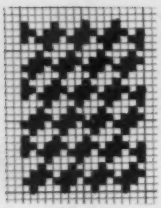


FIG. 8. Basic weave generally employed for blankets—a 1x3 twill for the face picks and a 3x1 twill for the back.

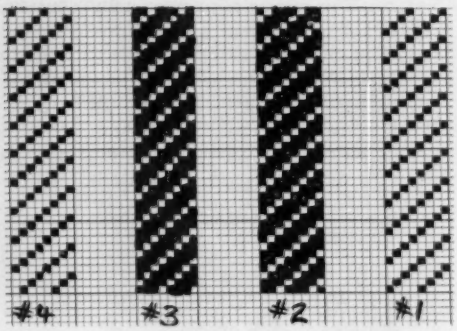


FIG. 9. Weave slips for a blanket design to be utilized on an automatic loom with the shuttles weaving 2x2. The design itself can also be simplified so that two cards are cut from each line on the design.

(Continued from page 97)

Care must always be taken when making these card cutting instructions to ensure that all weaves are applied so as to stitch in both the face and back of the cloth. In the example given, where the filling floats as an 8-harness satin on the face, the other shuttle is weaving in as plain weave, as shown on the #4 slip. When certain weaves are used as filling floats, such as fancy weaves and shading effects, it is sometimes necessary to paint these effects on the design, probably using black paint on the red portions and blue on the yellow. For a design made in this manner the card-cutting instructions would read as follows:

Cut 2 cards from a line

1st. Card (Red shuttle)	Cut #1 slip on Paper Cut Black as painted Cut #4 slip on Yellow and Blue
2nd. Card (Yellow shuttle)	Cut #2 slip on Paper Cut Blue as painted Cut #4 slip on Red and Black

Blankets fall into this category, being generally woven on 4x1 box looms. The warp is often made of finer yarns than the filling, the whole fabric being a filling float both face and back. The filling being napped during the finishing process gives the distinctive blanket feel.

The basic weave generally employed for blankets is shown in Fig. 8, this being a 1x3 twill for the face picks and a 3x1 twill for the back. Modifications of this are sometimes used.

These weaves may readily be cut from weave slips. Moreover, the design itself can also be simplified so as to cut two cards from each line. If this were done for an automatic loom with the shuttles weaving 2x2, the weave slips would be as shown in Fig. 9 and the card cutting instructions would read as follows:

Cut 2 cards from a line

1st Card 1st line (Red shuttle)	Cut #1 slip on Red Cut #3 slip on Paper
2nd. Card 1st line (Yellow shuttle)	Cut #2 slip on Red Cut #4 slip on Paper
1st Card 2nd line (Yellow shuttle)	Cut #2 slip on Red Cut #4 slip on Paper
2nd. Card 2nd line (Red shuttle)	Cut #1 slip on Red Cut #3 slip on Paper

Some fabrics are planned to utilize two shuttles for only a portion of the design, the balance being made with one shuttle. The two-shuttle portion is woven with twice as many picks per inch as the remaining single-shuttle portion. This is done by using some device, usually controlled by special hooks on the Jacquard, to raise the pick pawl for the required picks, thereby inserting twice as many picks as called for by the pick gear. The effect produced is known by such terms as crowded picks, double density, letbacks, etc.

Designs for this class of goods can usually be laid out as though they were for single-shuttle fabrics. The card cutter cuts one card per line for the single-shuttle portion and two cards per line for the double-shuttle. Included in this category are dress goods, shirtings, upholstery and drapery, bedspreads, and various decorative fabrics.

Two-Warp and Two-Shuttle Fabrics. This type of construction, woven on both 4x1 and 4x4 box looms, is commonly used for upholstery, drapery, and other decorative fabrics.

A portion of an upholstery fabric made in this manner is pictured in Fig. 10. This fabric was woven on a 4x1 box loom, the warp being drawn in end-and-end, one end being ecru the other end various colors in stripes. The filling is two picks ecru and two picks black. The basic ground weave was formed by the ecru warp and ecru filling weaving plain weave as the face, the back being the color warp and the black filling weaving plain weave, these two effects being stitched together by a satin weave. The several figure effects were obtained by combining various weaves and colors of warp and filling, as outlined below:

Effect in Cloth	Weave	Warp	Filling
Ground	Plain	Ecru	Ecru
Light color	Plain	Color	Ecru
Dark color	Plain	Color	Black
Ecru filling float	Filling	Ecru	Ecru
Black filling float	Filling	Color	Black
Ground shading	Plain	Ecru	Black

If such a design were fully painted out, end-for-end and pick-for-pick, it would require many hours of extremely tedious work. However, it can very easily be simplified so that no weaves need be indicated on the design, all being cut from weave slips. The design would be arranged so as to cut two hooks for each hook on the design, and two cards from each line. Each weave effect would be painted on the design in a different solid color.

Due care must be exercised when making out the weave slips and the card cutting instructions,

FIG. 10. If the design for this upholstery fabric, which was woven on a 4x1 box loom, were fully painted out (end-for-end and pick-for-pick), many hours of extremely tedious work would be required. By utilizing weave slips, arranging the design to cut two hooks for each hook on the design and two cards for each line, and painting each weave effect on the design in a different solid color, the designer's work is greatly simplified.

FIG. 11. The cost of painting a complete design for a brocatelle like this one, which was made on a 4x4 box loom with a fine index Jacquard, in the conventional manner would be almost prohibitive. On the other hand, the design was quickly and cheaply made by the method described in this article.

to arrange to stitch in the back of the cloth as well as the face; otherwise, the back will be marred by long floats of either warp or filling.

Brocatelles and matelasses are other types of fabrics often made with two warps and two (sometimes three) shuttles. These fabrics are distinguished by having a high sley of fine count mercerized cotton, filament rayon or other synthetic yarn, as a face warp, combined with a low sley of heavier cotton yarn used as a binder warp. These two warps are woven from separate loom beams, the face warp weaving slack and the binder warp tight to produce the distinctive puffed effect of these fabrics.

In many cases the designs for brocatelle and matelasse fabrics can be simplified to appear much like a damask design. Their basic weaves are usually satins and plain weaves, although occasionally crepes and other fancy weaves are introduced.

One type of brocatelle that is very popular as a furniture fabric is illustrated in Fig. 11. This fabric was made on a 4x4 box loom using a fine index Jacquard on which the 16th hook of each row had been castout. The face warp was drawn in on the 1-2-3-4-6-7-8-9-11-12-13-14 hooks, the binder warp on 5-10-15 hooks, with, as stated before, the 16th hook being castout.

There were two shuttles weaving pick-and-pick, one shuttle containing a coarse cotton yarn and the other filament rayon. The basic weaves used were a 5-harness satin for the puff effect and the ground a crepe based on plain weave, these two effects being separated by a rayon filling float.

It is obvious that to paint out a design for this type of brocatelle, end - for - end and pick - for - pick, would involve so many hours of work that the designing cost would make this very popular fabric almost prohibitive in price. However, these brocatelles offer several opportunities for design simplification, depending on the proficiency of the operative who is to cut the cards.

Upon examination of the several weaves used, it can be seen that the design may be laid out so as to cut two cards from a line. Also as the binder warp ends (drawn in on the 5-10-15 hooks) only weave as plain weave on the rayon shuttle, these hooks need not be shown on the design at all, but can be cut from a weave slip. The satin and ground weaves can also be cut from slips. Thus, even this amount of simplification will reduce the design to an appearance very similar to an ordinary satin damask.

If the card cutter is not too experienced, it may be well to let the design be made in this manner; but if a reasonably proficient card cutter is to handle the work, the design may be very much more simplified and reduced.

The design paper should be based on cutting two cards per line, the binder warp on 5-10-15 hooks would be disregarded, and each of the groups of four ends drawn between each binder warp end would be represented by one square of the design paper. In other words, three squares on the design would represent 12 hooks of the Jacquard—#1 square standing for 1-2-3-4 hooks, #2 square for 6-7-8-9 hooks, and #3 square for 11-12-13-14 hooks. The card cutting instructions for a brocatelle made in this manner would be as shown in the box on the next page.

For these instructions the design would be painted paper for the ground weave, red for the rayon

AMERICAN MONORAIL LOOM CLEANER

prevents lint accumulation on looms and weave room ceilings

The first experimental loom cleaner was placed in operation by American MonoRail in 1948. A similar model was shown at the Southern Textile Exposition, Greenville, S. C., in 1949 and earlier that year was the subject of editorial mention in the textile magazines.

Since that time, much data has been gathered covering the application of loom cleaners under widely varying conditions. Not all experiments were successful. American MonoRail engineers are, therefore, fully qualified to make accurate recommendations based on actual experience.

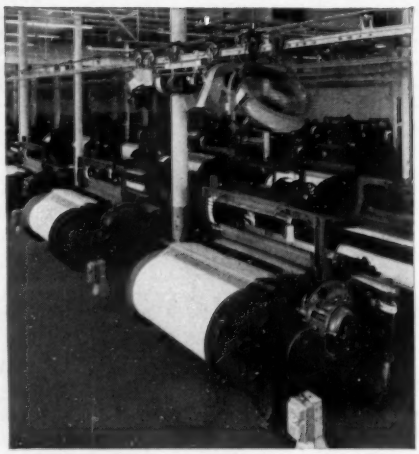
Here are a few results obtained under the conditions recorded—

Cost of cleaner installation reclaimed in 1.7 years by reduction of manual cleaning in a weave room operating at 77% humidity on synthetic yarn making fine goods.

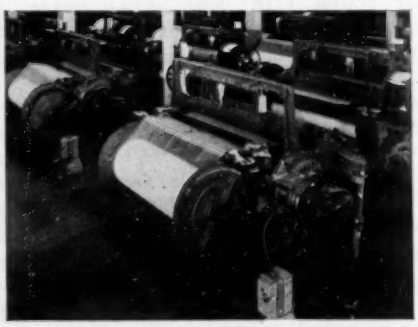
57% reduction of cleaning labor alone in weave room running over 1000 looms—90% humidity—light sizing—making gauze.

In a mill running on broadcloth, loom and ceiling cleaning over 500 looms showed an average of 1% upgrading of cloth. Cleaning labor savings pay for installation every two years.

Before you buy, make true mechanical evaluation of this equipment. Let an American MonoRail engineer offer recommendations at no obligation.



with automatic loom and ceiling cleaning 57% of manual cleaning is eliminated. Ceilings are blown-down once a month instead of every week.



without automatic cleaning lint piles up quickly. Above picture shows accumulation in 16-hour operation.

AMERICAN OVERHEAD HANDLING EQUIPMENT

MONORAIL COMPANY

13106 ATHENS AVENUE • CLEVELAND 7, OHIO

Continuous Dyeing of Wool Raw Stock in a Scouring Train

Advantages to be derived by continuously dyeing wool raw-stock in a scouring train were summarized as follows in a recent issue of "The Technical Bulletin," a publication of the Organic Chemicals Dept., Dyes and Chemicals Div., E. I. du Pont de Nemours & Co., Inc.:

1. Production is accomplished with less water, steam, and labor than that required for kettle dyeing an equal amount of raw stock.

2. Cost is estimated to be as much as 50% lower than a comparable kettle dyeing.

3. Fastness is equal to or superior to that of kettle dyeings made with acid dyes and, in many cases, greater levelness is obtained.

4. Stock is in much better condition and performs better in subsequent carding and spinning operations than kettle dyed stock. Consequently, yarn should be stronger.

5. Existing mill equipment is utilized, eliminating the need for elaborate machinery.

According to the Bulletin, a new technique for continuously dyeing wool raw stock has been developed by Du Pont technicians and has proved commercially successful. The carpet industry in particular has found this method of special interest, the publication stated, because it is applicable to large lots of stock running 5000 pounds and over. This method is said to be based on the use of the "Capracyl" dyes which supply the exacting requirements for continuous application. A selected range of neutral and acid dyes has also been found satisfactory where greater shade brightness is needed.

Briefly here is how continuous dyeing of wool is done in a scouring train:

Dyeing is carried out in the fifth bowl after previous scouring and rinsing operations in the first four bowls. In general the dyeing phase of the procedure calls for the introduction of dye and acid at a predetermined rate consistent with the wool feed. The dye bowl is set with enough dye to maintain equilibrium and also sufficient acid to keep the pH at approximately 3.5. Temperature in the dye bowl is kept at 205-210 F. Liquor is circulated from back to front by a pump so that there is complete uniformity of the dye liquor throughout the bath.

filling float, and yellow for the warp satin puff. Weave slips for the necessary weaves would follow the same method previously outlined. If additional effects were desired, additional colors of paint and additional weave slips would be required.

The design reduction outlined here for a brocatelle may be considered as an example of the most extreme manner of simplifying a Jacquard design. In this way a large floral pattern may be condensed onto quite a small piece of design paper; and since the weaves need not be indicated on the design, it may be quickly and cheaply made.

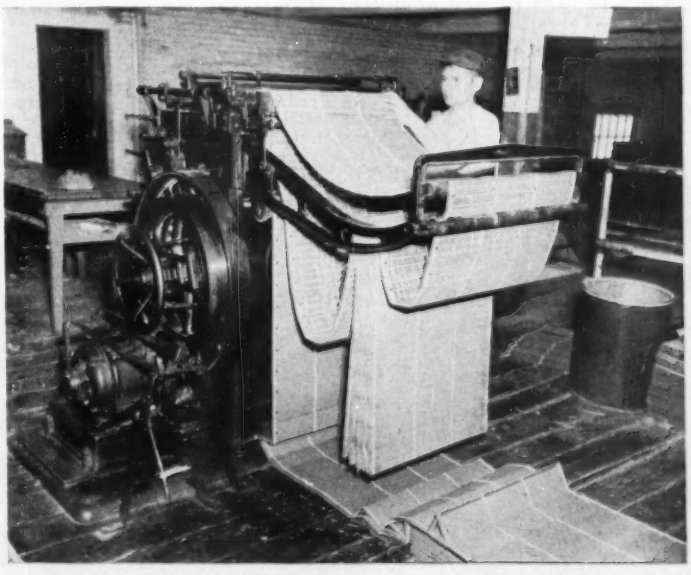
The foregoing outlines some of the methods that can be employed in conjunction with proper card-cutting techniques in the simplification of Jacquard designing. The extent to which they can be used is governed somewhat by the degree of proficiency and training attained by the card cutter who is to handle the work.

One additional method of simplification that should not be overlooked, when a Jacquard card repeater is available, is the combination of hand cutting and repeating-in weaves by the use of the repeater. A description of some of these methods appeared in the article "The Jacquard Card Repeater," in TEXTILE INDUSTRIES for June 1950 [pp 116, 117, 119, and 121].

Cut 2 cards from a line

	Face Warp 1-2-3-4-6-7-8-9-11-12-13-14	Binder Warp 5-10-15
1st Card (Cotton)	Paper from weave slip Yellow 5-harness satin Red from weave slip	Miss all colors
2nd Card (Rayon)	Paper from weave slip Yellow solid Miss Red	Plain Weave on all colors

FIG. 12. A power-driven Jacquard card repeater, under the supervision of a competent technician, can be used in many ways to effect savings in a Jacquard weaving mill.



PULLING STATIONS consist of stalls. Pullers toss sorts in their designated places located in front, to the rear, and underneath the beams or sloping tables on which the skin is placed for pulling.

Detailed grading system assures narrow sort variation in WOOL

Staff Prepared
EXCLUSIVE

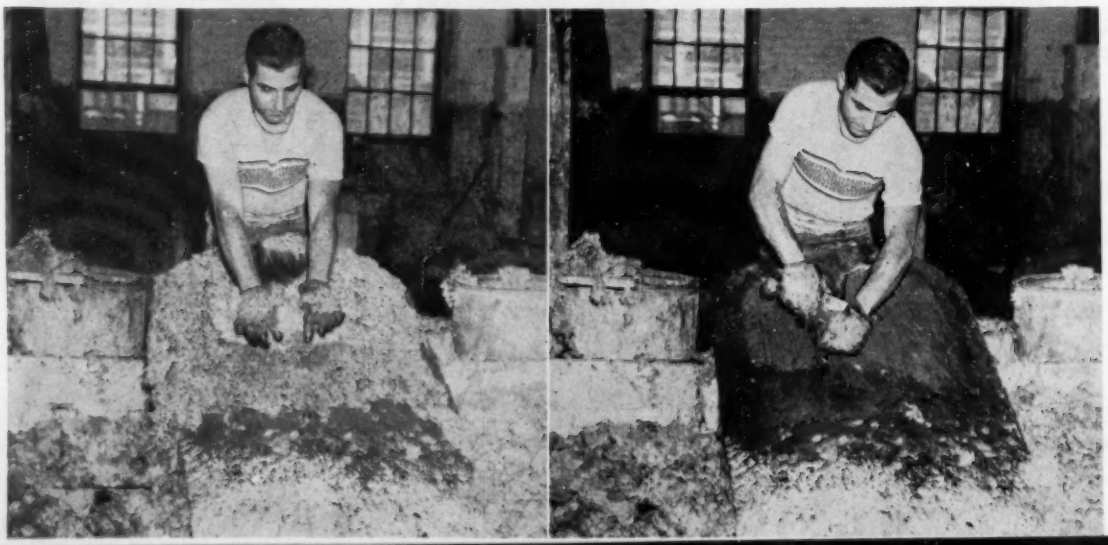
THE PULLING department of Hyman Brodsky & Sons, Inc., Philadelphia wool pullery, is set up to grade wools being pulled by the depilatory process into grades that can be used for end products requiring careful classification within strict limits.

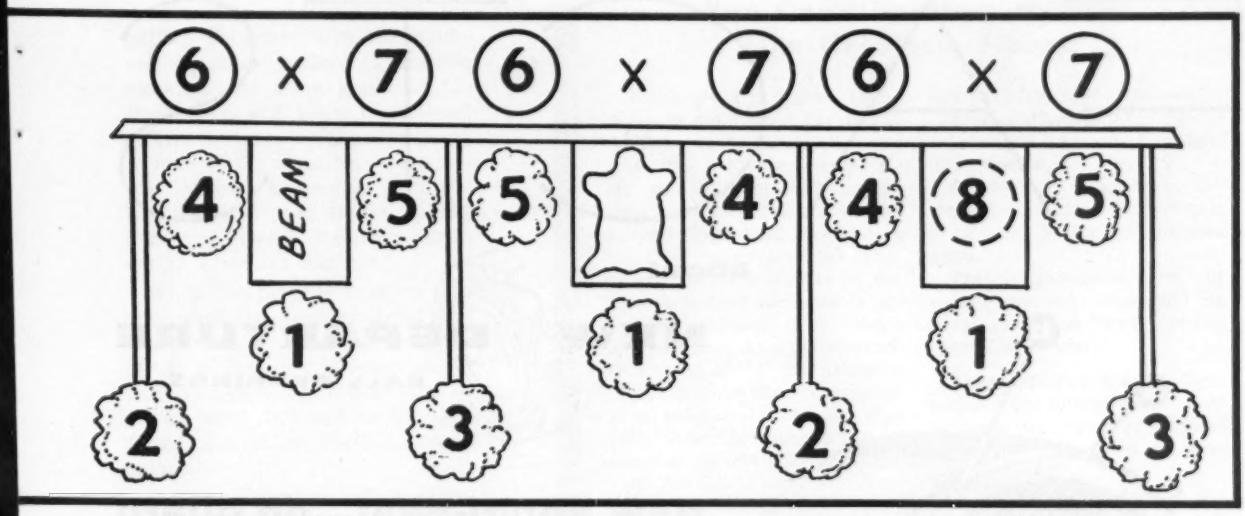
The reasons for this lie in the nature of the sorting that is done as the wool is pulled. Along with uniformity of fiber, the process also can produce wool that is free of burs and other foreign matter.

Pulled wools represent about 25% of the total wool consumption of this country, and are commonly used for sweaters, blankets, knitting yarns, and cotton-wool mixtures for underwear.

Grading. Skins are "painted"

MAIN GRADES are pulled first (left). These vary in location on the skin, depending on its origin, but generally come from back and shoulders. Right: Off-sorts are usually taken from the border that skirts the skin. Puller is shown here clipping from the skin. Head, tail, and shank wools are too difficult to pull, since the depilatory does not penetrate the thick skin of these parts, and so must be cut.





POSITIONS OF SORT PILES in three adjacent pulling stations. "X" indicates position of pullers; sort piles 1, 2, and 3 are main grades, others are off-sorts. Plies 2 and 3 are shared by two neighboring pullers. The eight sorts shown here are for B-Super.

PULLING

with a depilatory to allow for proper pulling of the entire skin, followed by a general grading and stacking by grade onto a truck, which is routed to the pulling department.

The skins originate from domestic sources, and also from Australia, New Zealand, South Africa, and South America. They are graded to the specific end use of the customer as ordered. Grading for standard usage in advance of specific orders is also common practice at the Brodsky plant.

Generally this grading of the unpulled skin is done on three principal bases:

1. Length, including 3 main grades: long wools for combing, medium or clothing lengths, and the short shearlings.

2. Color, graded as Whites, Stained, Grays, and Blacks.

3. Foreign Matter, which considers burs, paint, tags, etc.

Pulling and Sorting. The skins thus graded for length and general

APPROXIMATE COMPARISON OF WOOL GRADES USED IN THE UNITED STATES

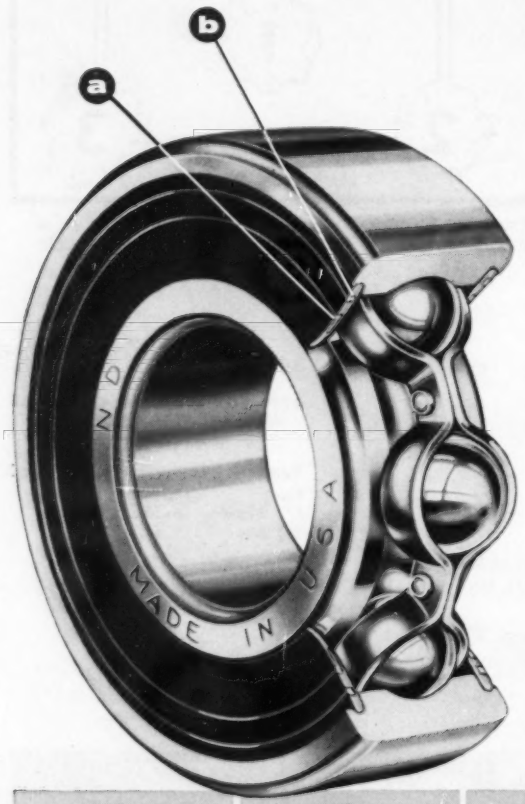
Domestic	English	U. S. Pulled
Fine	64s-80s	AA
1/2 blood	58s-62s	A
3/8 blood	56s	B
1/4 blood	48s-50s	B
Low 1/4 blood	46s	C
Common	44s	C
Braid	36s-40s	C

SORT PILES are inspected often. No pile is placed on a collection truck without first having been checked by overseer for accuracy of sorting.

FACTS

about

NEW DEPARTURE
BALL BEARINGS



New Sentri-Seal...on guard against dirt and wear!

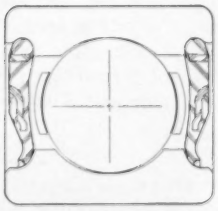
The unique design of the Sentri-Seal gives optimum protection against dirt, and includes a number of other major advantages.

Sentri-Seals are quickly removed, easily replaced. As the seal is of synthetic rubber, in which two metal rings are embedded, a constant-rate spring is created between the rings. Inherent flexibility prevents distortion of the bearing outer ring due to seal insertion, permitting the use of bearings to the higher accuracy specifications. The spring action maintains an efficient sealing contact with the bearing ring to bar dirt and retain lubricant. Sentri-Seals are relatively inert to oils and greases and operate satisfactorily through a temperature range of −40°F to 225°F. Specifications available for still higher temperatures. In applications where relubrication is desired, it is easily accomplished by the injection method.

The New Departure Sentri-Seal basically consists of two separate metal rings, "A" and "B", embedded in synthetic rubber, resulting in a spring which absorbs distortion and deflection. The seal is not drastically influenced by axial displacement due to bearing end-play within prescribed tolerances, and provides efficient sealing at low torque. Bearing shown is equipped with two seals.

The diagram shows in section the New Departure Sentri-Seal. Lip contacting surfaces are form-ground simultaneously with the ball race, giving an extremely high degree of concentricity between sealing surfaces and the raceway.

Sentri-Seal is available for a range of sizes in single-row, standard-width bearings and also in two types of New Departure adapter bearings. Sizes, dimensions and capacities are listed in the latest New Departure catalog.



Write for full details on Sentri-Seal

NEW DEPARTURE • DIVISION OF GENERAL MOTORS • BRISTOL, CONN.

wool quality are brought into the pulling department in the morning; as many pullers as possible work on the same grade at the same time, and work is assigned so that the men finish up the grade as near to the same time as possible. The reasons for this lie in the fact that sort piles on the pulling floor are shared by pullers working at adjoining stations.*

While the number of sorts that are pulled from any grade of skin varies with the grade, an example of the pulling of a B-Super shows that the detailed breakdown of pulled wools is based on the skill factor possible only with a manual operation.

B-Super consists of medium length fiber, white, and is equivalent to a ⅜ blood or 56s.

The skins grouped at several adjacent pulling stations are placed on the "beam" of the stall with the head end nearest the puller. Pulling is done, in this case, so that eight sorts result.

Because of the great variety of skins found within the same general grade, no generalization can be made as to the location of the various sorts on the skins. There are however, three main sorts, and five off-sorts; these eight sorts can be pulled from various places on the skin, depending on its origin, but generally the main sorts come from shoulders and back while the off-sorts originate at the skirts of the skin.

The pulling and sorting is done quite rapidly; pullers work in adjacent stalls and each throws the sorts on piles located near the beam on which he works. Considering that there are eight sorts in the example cited, reference to the accompanying diagram captioned Positions Of Sort Piles illustrates the location of the various sorts with the main sorts numbered 1, 2, and 3 located at the front, front right, and front left of the beam.

Important to the maintenance of good uniformity within a sort is close supervision. This is accomplished at Brodsky's through constant spot checking by an overseer. In collecting wools of the same sort from pullers' stations for delivery to following operations, no wool is removed from the floor without such a check by the overseer for sorting accuracy.

*The term "sort" as used here is meant to denote the fine breakdown of the skin as the fleece is pulled from it. "Grade" indicates a general classification of the unpulled skin. Both sorting and grading are done on the basis of length, foreign matter, and color.

You Can't Vat Dye Acrilan Like Cellulosic Fibers!

There are two factors to be borne in mind when vat dyeing Acrilan acrylic fiber:

(1) It is a highly oriented fiber and will not soak up dye solutions like a blotter as the natural fibers will. Dye liquors must be forced into the fiber or else only the surface of the fiber will have a chance to selectively remove from these dye solutions. At a temperature of around 230 F the diffusion of dye into the fiber takes place at a satisfactory rate, so that fully penetrated dyeings can be achieved in one hour or less.

(2) Acrilan is an acrylic fiber and so can be degraded by prolonged exposure to very hot caustic solutions. Entirely satisfactory dyeings have been obtained at a pH of 10.0.

So, to apply vat dyes to Acrilan you must: (1) use a milder alkali such as sodium carbonate; (2) use a reducing agent which is stable at elevated temperatures, such as sodium formaldehyde sulfoxylate; and (3) select dyes for maximum temperature stability or, where necessary, protect the dye from over-reduction by the use of some agent such as dextrin.

Procedure. Most satisfactory procedure tried thus far for 100% Acrilan stock is as follows:

Add pigment to cold dyebath and disperse throughout package while raising temperature to 180 F.

At this temperature, add 10-20% sodium carbonate, followed by same amount of sodium formaldehyde sulfoxylate.

Raise temperature to 200 F.

Add about 5% of sodium hydrosulfite as necessary to obtain proper reduced color.

Cut off external circulation and raise temperature to 230 F for 30 to 60 minutes.

Cool bath to 180 F, drop bath, and give stock hot rinse.

Good results have been obtained by combining oxidation and scouring steps as follows:

Treat stock with 0.1% $NaBO_3$ solution for a period of 10 minutes at 160 F.

Add ½% of a synthetic detergent and raise temperature to 200-205 F for 20 minutes more.

These procedures are, of course, general ones, and as usual some vat dyes require special treatment.

Acrilan/Rayon Blends. Tentatively, the following approach to union vat dyeing of Acrilan-rayon blended yarns is suggested:

Use indigoid vats for the Acrilan, anthraquinones (or sulfurs where necessary) for the rayon.

Again disperse pigments through stock before reducing in the full bath. Use same reducing agents and obtain reduction as outlined for 100% Acrilan stock.

When proper reduction is obtained, close off external circulation and carry out dyeing at 230 F as before. Best use of rayon dyes is obtained by cooling to about 120 F before dropping the bath and, if desired, external circulation can again be used and NaOH and hydrosulfite may be added to maintain reduction.

Rinse as normal for rayon, rather than hot rinse recommended for Acrilan above.

Oxidation must also be carried out with rayon component in mind. Begin at room temperature with 0.1% solution of $NaBO_3$; raise to 130 F and hold for 10 minutes. Add detergent and raise to 200 F to simultaneously complete oxidation and to scour the fibers free of surface dye.

This procedure for Acrilan/rayon blends has not been fully evaluated.

From papers presented at a meeting of Southeastern Section, AATCC, by W. H. Hindle, associate director of research, and Dr. E. D. Smith of The Chemstrand Corp., Decatur, Ala.

Wica Chemicals
INCORPORATED
DYESTUFFS • INDUSTRIAL CHEMICALS • TEXTILE SPECIALTIES • LATICES • ADHESIVES
P. O. BOX 506 PHONE FR 6-6514 OLD CONCORD RD.
Charlotte, North Carolina

Dear Jim:

Here is a snapshot of my boys. I know that you would like to see the men who solved your problems by producing that special polyvinyl acetate for your specific need. So many people have heard that we do attack each mill's problem individually and have made so many modifications in the emulsion polymers and copolymers for natural and synthetic yarns and fabrics, that we are building a new plant to accommodate the terrific demands.

I remember how skeptical some folks were when we began the individual approach. On the surface it did seem foolish. I heard so many complaints from plant supervisors and dye chemists who had tried one company after another and product after product without success, that I just had to tailor a specific product for the specific need. Now these users are certain that each product will have the same standards each time it is used. The peace of mind in this one fact means a lot, to say nothing of the actual savings.

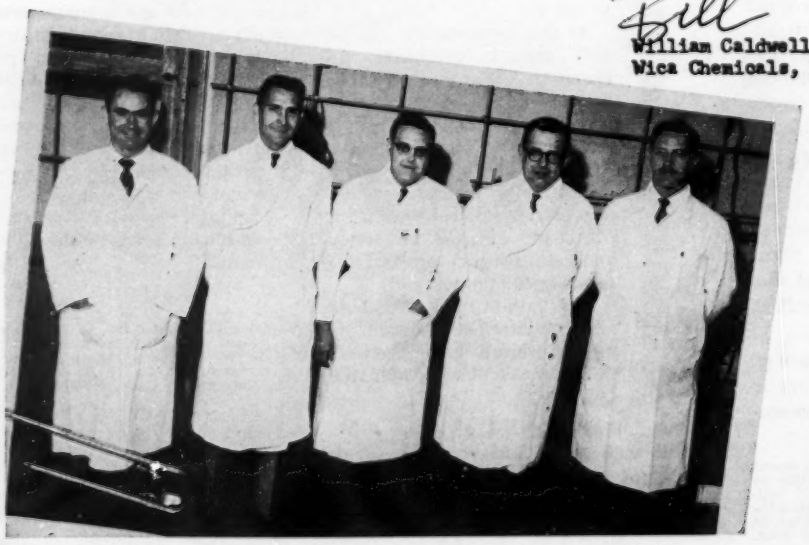
As soon as the new plant is completed, I'll send you another snapshot. We're really proud of our progress and success that enables us to build and expand. The credit should go to you and the other mills who called on us for the answer and got the right one.

I'm looking forward to the opportunity of helping you with any other problems that you may have with your own new developments, whether in the fields of latices or resin emulsions.

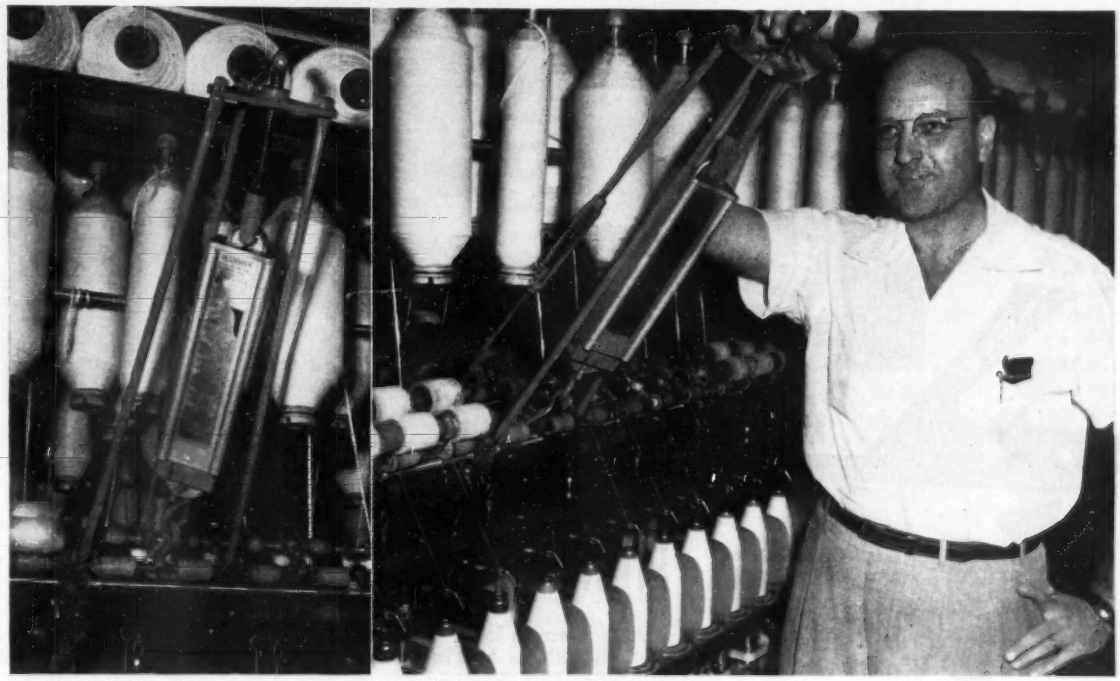
Sincerely,

Bill

William Caldwell
Wica Chemicals, Incorporated



Do you use some device for measuring weight on spinning rolls?



WEIGHT MEASURING DEVICE for top rolls of spinning frame was copied from one used by a major machinery manufacturer. Weight can be measured on one roll or on all rolls together. Leverage applied by turn screw is registered on scale, and weight on scale is equal to weight on roll when top roll stops turning, or when roving breaks if it was not broken back before mounting device on frame. Point when scale reading and roll weight are equal may also be determined by slipping gauge between top and bottom roll. Weight can be measured to one ounce.

Textile Operating Executives of Georgia answered this and several other timely questions during their recent

CARDING-SPINNING FORUM

Staff Report

MILL MEN representing more than one-and-a-quarter million Georgia spindles met at the Harrison Hightower Textile Building of the Georgia Institute of Technology, Atlanta, on April 23, under the auspices of the Textile Operating Executives of Georgia, for an open forum discussion of carding and spinning topics. Answers to and discussion of the most timely subjects are digested here for easy reading and ready reference.

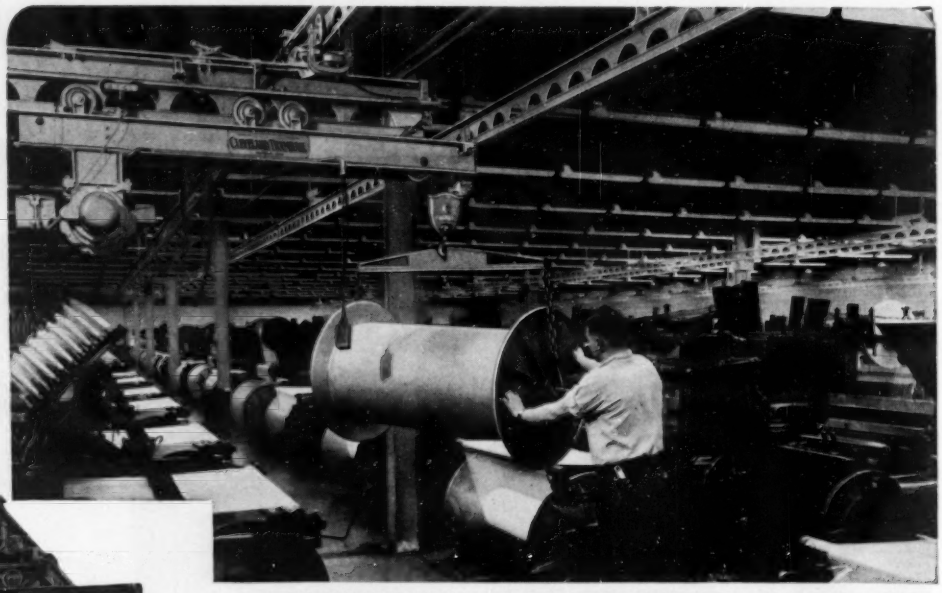
At an election held as part of the meeting, the following Georgia mill men were called upon to serve as members of the association's executive committee: **George McMillan,** Crystal Springs Bleachery, Chickamauga (re-elected); **E. J. Crocker,** Strickland Cotton Mills, Valdosta; and **Lloyd K. Williams,** Thomaston Mills, Thomaston.

Opening and Picking

Cotton Fiber Tests. The Micronaire or some other instrument for measuring fiber fineness is used by all of the mills answering a question asking for details of their program for testing cotton fiber as received at the mill.

The majority of the mills determine the fineness of all of the cotton received at the mill, use the results to segregate cottons by fineness groups, and then blend to maintain uniform fineness.

One mill buys part of its cotton against actual samples, which are Micronaired before purchase. Other cottons are bought with a specified range of Micronaire read-



Despite the columns in this aisleway, beams weighing up to 1500 lbs. are easily doffed from the creels of the looms on either side of the aisle with the cantilever carrier on the Cleveland Tramrail transfer crane. The carrier can be transferred to any of a large number of bridges serving the entire weave room.

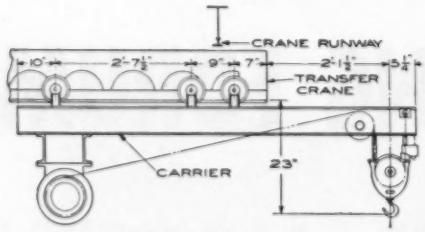
TRAMRAIL CANTILEVER CARRIER Provides Handling Around Pillars

A problem in loom beam handling in the weave room of the Gerrish-Milliken Mill in Pendleton, S. C. was solved by the use of a specially designed carrier with a cantilever arrangement that permits the unit to handle loads beyond the end of the crane on which the carrier operates.

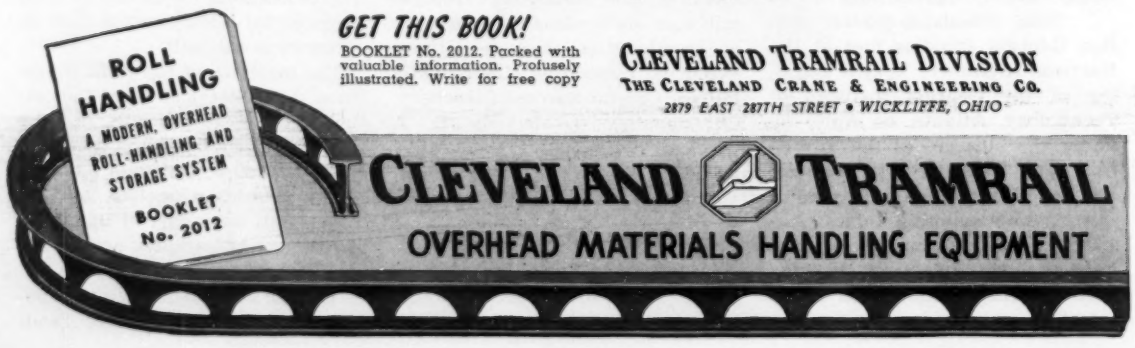
The room was originally planned to accommodate a number of rows of looms with one alley serving every two rows. However, the roof-supporting pillars were so located that it was impossible to handle the heavy beams from the looms located along one side of some of the alleys with a standard crane. Such a crane, long enough to permit a hoist carrier being spotted over the loom creels, would not clear by the columns.

The Cleveland Tramrail crane designed for this application was made short enough to pass the columns. The carrier, with its extension feature, permits the hoist to reach out as much as 2'-1½" beyond the end of the crane. When it is necessary to travel the crane for some distance on its runway, the carrier is moved in sufficiently from the crane end to permit safe clearance of the columns.

This special unit gave the mill more freedom in working out the loom layout without regard for the location of the columns. It is one example of the many ingenious designs developed by Cleveland Tramrail for providing efficient overhead materials handling.



Load capacity one ton.



GET THIS BOOK!

BOOKLET No. 2012. Packed with valuable information. Profusely illustrated. Write for free copy

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
2879 EAST 287TH STREET • WICKLIFFE, OHIO

CLEVELAND TRAMRAIL
OVERHEAD MATERIALS HANDLING EQUIPMENT

RELATIVE HUMIDITY MAINTAINED IN OPENING AND PICKING

Mill	Opening %	Picking %
C	55±4	55±4
G	1	65
H-2	1	45
I	55	55
K	1	2
L	55	55
Q	1	45
S	1	40-45
U	50-55	50-55
V	50-55	50-55
W	55-60	55-60

[1]Not controlled
[2]Regain of 6½% maintained

ings. Cotton is spot-checked at delivery. Since purchase specifications are narrow, blending by fineness is not required.

The testing program at another mill is more elaborate than those of the other mills reporting. After bales are classed for grade and staple, a sample from each is run through the Speedar [TI for April, 1955, pp. 139 and 141; and June, 1955, p. 220] to determine fiber fineness, after which dyeability is measured by the differential dye test. In many cases, samples are run through the Shirley Analyzer, Arealometer, and Pressley tester for further evaluation. The mill buys cotton with a minimum fineness specified. Cottons are divided into two groups: those with a Micronaire reading of 3.0 to 4.0, and those whose reading is 4.1 or above. The mill uses a 40-bale mix, 20 bales from each of these two groups.

All of the reporting mills are agreed that the extra expense of testing is more than compensated for by better running work and more even yarn.

Control of Air Currents. Only one mill reported experience with changing air currents in the mote box under the picker beater by installing baffles in front of the beater and pulling the air up in front of the beater instead of up through the grid bars. This mill installed baffles in the finisher sections of all its pickers, in each case with a Kirschner beater running at 1075 rpm.

The principal objective of the installation was to reduce the trash which it was felt was removed by pulling the air through the grid bars. In the words of this mill's representative, "We think we did make an improvement here, but as to a more even lap or other

CARDING-SPINNING FORUM

- Cotton Fiber Tests
- Humidity in Opening and Picking
- Control of Air Currents on Pickers
- Card Clothing Life

benefits we have been unable to determine any success."

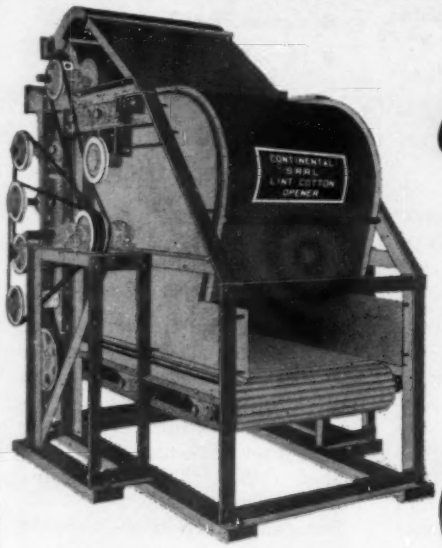
Running Synthetics on Pickers. It is the consensus but not the unanimous opinion of Georgia mills that better results are obtained by blending synthetic staples prior to feeding the picker hopper rather than by feeding directly from the bale.

The mills advocating blending before feeding the picker feel, of course, that a better blend is obtained by early blending. **Mill J,** which feeds directly from the bale, does so because this method permits better control and functioning of the evener motion of the picker. When the stock is blended before picking, it becomes more open and fluffy, filling the blending reserve but without enough weight to per-

GEORGIA MILLS REPORT ON CARD CLOTHING LIFE

Mill	Cylinder No. Wire	Cylinder Life, Years	Doffer No. Wire	Doffer Life, Years	Flats No. Wire	Flats Life, Years	Cotton Grade	Grinding Cycle, Hr	Prod. Rate Lb/Hr	Stripping, Times/8 Hr	Type Stripping
A	100	10	110	20	110	16	M	253	12	3	Vacuum
C	100	15	110	15	100	6½	SM	215	7.75	3	Vacuum
C	100	10	110	10	100	6½	low	215	11.25	4	Vacuum
D	100	9	110	9	110	10	SLM-M Br	220	9-14	3	Vacuum
E	100	10-15	110	15	110	10-15	M-SLM	2800 lb	15	2	—
F	100	6-8	110	7-8	110	8-10	M-LM	456	8½-15	2[1]	Vacuum
G	100	8.4	110	8.2	110	8.0	M-SLM	346	20	—	Continuous[2]
H	100	12	110	15	110	12	M	3760 lb	16	3	Roller
H-1	100	8	110	10	110	10	SLM-SM	2800 lb	10-21	—	Continuous[3]
I	110	10-15	130	10-15	130	10-15	Karnak 3	360	6.25	3 1/5	Vacuum
J	100	10-15	110	15+	110	10	M-LM-SGO	25 days	15-20	—	Continuous
K	100	9	110	8	120	9	M-SLM	220	6½-15	2	Vacuum
L	100	12	110	13	110	12	SLM	288	12	2 2/3	Vacuum
M	100	15	110	10	—	10	M-SLM Br	400	9½	3	Vacuum
N	100	5	110	7	110	7	M-SLM	288	17	—	Continuous[4]
O	120	6	130	10	130	8	Karnak & SM	288	4.26	3	Vacuum
Q	100	7	110	8	110	11	M	288	9	2	Roller
R	110-120	12	120-130	20	120-130	12	Karnak & M-GM	240	3½-8	3	Vacuum
S	100	5-7	110	8-10	110	10-12	M-SLM	216	12 1/3	3	Vacuum
T	100	10	110	10	110	7-10	M-SLM	254	8.9	3 1/5	Vacuum
U	120	10-12	130	12-15	130	8-10	Karnak & Peeler	288	4½	3	Vacuum[5]
V	100	6	110	8	—	8	SLM	345	12.5	—	Continuous[6]
W	100	7-8	110	14-15	110	20-22	M	720	8	3	Roller

[1]Strip every 72 hours with brush
[2]Strip doffers once every 24 hours
[3]Strip doffers each 8 hours, cylinders each 24 hours
[4]Strip doffers once each 8 hours, cylinders each 144 hours
[5]Strip once each week with roller
[6]Strip doffers each 4 hours, cylinders each 23 hours

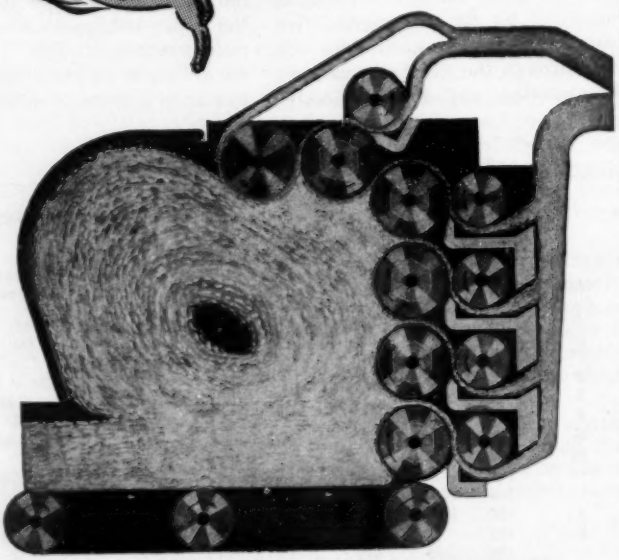


Continental's SRRL FIBRE OPENER

SAVES SPINNABLE FIBRE
PRODUCES BETTER YARNS
IMPROVES PROCESSING

This revolutionary new type cotton opening machine was developed by the Southern Regional Research Laboratory and first manufactured commercially by Continental. Its prime function is to open and fluff cotton. Laboratory tests and mill experience have shown it does this at high capacity without damage to the fibre. While designed primarily to facilitate cleaning machine-harvested cotton through better opening, it is an excellent blender. This makes it also valuable for high grade cotton. Initial cost and operation are both low.

We invite you to write for Bulletin 208 which gives complete description



SECTIONAL VIEW

Continental GIN COMPANY

BIRMINGHAM, ALABAMA

ATLANTA • DALLAS • MEMPHIS

mit correct functioning of the evener motion.

Carding

Job Lay-Out for Card Grinders. Of 24 mills discussing their card grinding set-ups, 13 do grinding on all 3 shifts. Grinding is done only on the first shift at 5 mills, and on the first and second shifts at another 5 mills. One mill reported that all of its grinding is done on the second and third shifts.

Most of the reporting mills do not employ special card setters; setting is done by the grinders. **Mill K,** which does have setters, has the following division of duties:

Grinders:

1. Prepare card for grinding: clean, strip, etc.
2. Grind card.
3. Set doffer to cylinder.
4. Set doffer comb to doffer.
5. Put card back into production.

Flat setters:

1. Set flats.
2. Set stripper plate.
3. Set front bottom plate.
4. Set all brushes.
5. Set stripping comb.

Back setters:

1. Set screens.
2. Set back plate.
3. Set licker-in.
4. Set mote knives.
5. Set feed plate.

At **Mill M,** which does not employ setters, grinders have the following duties:

Settings made every round: doffer to cylinder, doffer comb to doffer.

Settings made every other round: flats to cylinder, licker-in to cylinder, feed plate to licker-in, all screen points, front plate top and bottom, back plate top and bottom, mote knives, flat comb to flats.

Oil fast work every day, slow work every other day.

Keep up break-downs on 34 cards.

Check stripping system on each card ground.

Weigh card waste on their shift.

Repair comb boxes on 34 cards.

Overhaul grinding rolls.

Large Sliver Cans. Four mills reporting on conversion of 12-inch drawing frame coilers to run 14-inch cans found that it was necessary to use a larger tube gear for best results.

One mill converted from 12-inch to 14-inch cans using the same tube gear and also using a larger tube gear, with a new top plate in each case. Can weight was increased 25 per cent when the same gear was used, but was increased 36 per cent by increasing the size of the tube gear.

Another mill, which converted 180 deliveries from 12-inch to 14-inch coilers, found it necessary to change the tube gear from 98 to 100 teeth, and also to change the pinion gear in the coiler drive.

At **Mill H-2,** change-over to a larger can was done simultaneously with the installation of compression calender rolls. Increase in can weight was more than 100 per cent.

Overhauling Roving Frames. Judging from response to a question on the frequency of overhauling roving frames, about half of the mills in Georgia give them a complete overhaul once a year, about a quarter overhaul twice a year, and the rest overhaul quarterly, every three months, or "as necessary."

Most but not all of the mills clean rolls and aprons between overhauls; a three-month cleaning cycle is common.

At one mill, roving frames are overhauled every six months, a "partial overhaul" on one cycle, and a "complete overhaul" the next. A partial overhaul includes spindle shafts and gears; line and level frame; clean replace, and line steel rolls; change grease in bearings and bolster steps; and buff and lubricate ball bearing top rolls.

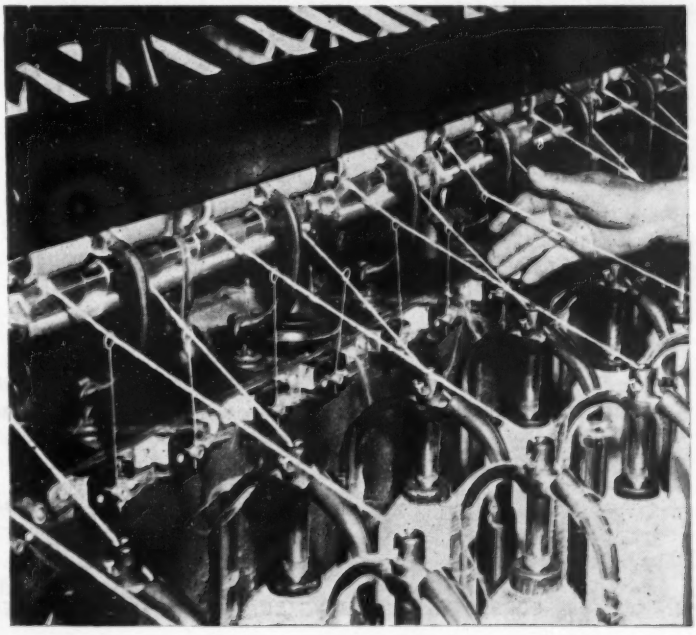
A complete overhaul includes all the foregoing, plus removal of all gears, shafts, and bearings, and replacement of all worn parts.

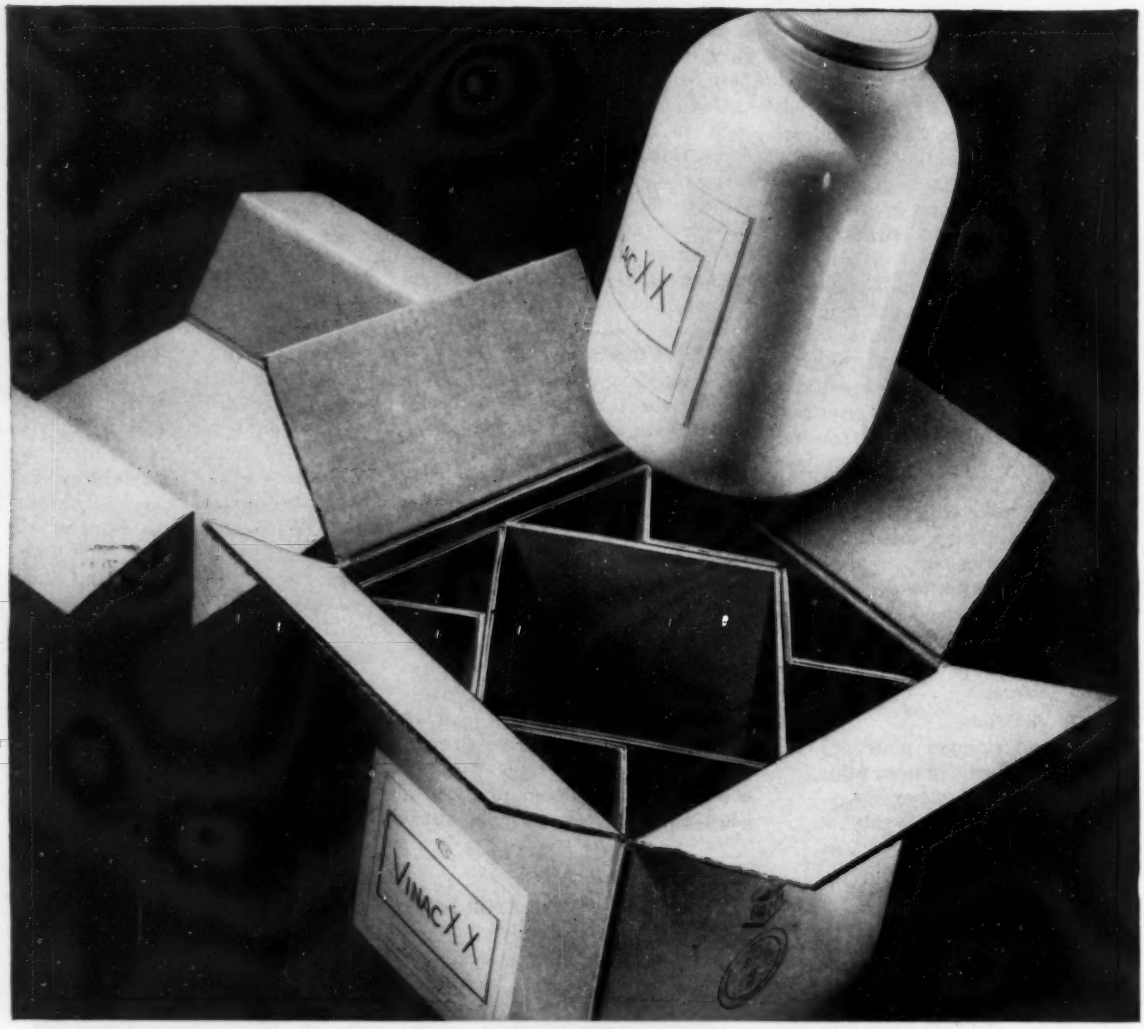
Roving Stop Motions. Three

CARDING-SPINNING FORUM

- Job Lay-Out for Card Grinders
- Large Sliver Cans
- Overhauling Roving Frames
- Roving Stop Motions

ROVING FRAME STOP MOTION has produced such good results at **Mill W** that all filling roving frames are to be equipped with it. The advantages found at this mill are reductions in light roving, singling, piecings due to ends down caused by other ends, and flying waste. The mill expects to increase job loads by 25 per cent.





New way to mail a glass bottle

The old way — the one Gair and the Colton Chemical Company of Cleveland (a division of Air Reduction Co., Inc.) have now streamlined — was messy and costly.

It involved an oversized shipping container, with hard-to-handle sawdust taking up the excess space. Finally tired of scattering profits along the sawdust trail, Colton took time to listen to the man from Gair. Now they're glad.

Their new Gair corrugated container eliminates the sawdust completely, along with the expense of buying, storing, moving, and cleaning it up. Packaging costs are down to a minimum and breakage (low before) has disappeared.

The trick, of course, is Gair's structural design of the container — using two creased corrugated sheets to handle *all* shocks. The trick in getting more protection for your product? To get the answer, call *your* nearest Gair container plant. One of our men will be glad to talk to your shipping people.

YOU'RE LIVING NEXT DOOR TO THE EXPERT

GAIR CONTAINER PLANTS: Atlanta, Ga. • Cambridge, Mass. • Cleveland, Ohio • Holyoke, Mass. • Jackson, Miss. • Los Angeles, Cal. • Martinsville, Va. • New Orleans, La. • No. Tonawanda, N. Y. • Philadelphia, Pa. • Plymouth, Mich. • Portland, Conn. • Richmond, Va. • Syracuse, N. Y. • Teterboro, N. J.

SINCE 1864

GAIR

SHIPPING CONTAINERS

FOLDING CARTONS • PAPERBOARD

ROBERT GAIR COMPANY, INC. • 155 EAST 44TH STREET • NEW YORK 17, N.Y.

mills reported experience with electrical roving stop motions, all small installations. Two of these gave their opinion of the stop motion. One could find no benefit from it, while the other finds its roving definitely better. Light roving, singling, piecings due to ends down caused by other ends, and flying waste caused by ends down are reduced. This mill plans to install the stop motion on all its filling roving frames (10 x 5 frames producing 2.10-hank roving), and expects to increase job loads by 25 per cent.

The only disadvantage found by this mill so far is the difficulty in wiping the backs around the drop-wire eyes.

Spinning

Large-Package Spinning. The mills of Georgia have had wide experience in conversion to large-package spinning, and have experimented with and evaluated most of the available bobbin and spindle types, judging from their discussion of this subject.

At one mill spinning 14s from 7/8" SLM cotton, packages were converted from 9" to 9½", and wooden bobbins were replaced by paper tubes. Amount of yarn on the package was increased about 14 per cent, and doffers' assignments increased the same amount. However, spinners' side assignments were not increased.

Experience with paper tubes is satisfactory at this mill, although some of them do get damaged at the spooler. The metal strip around the bottom of the paper tubes gets bent, causing them to fit tightly at the bottom of the spindle and also causing some high bobbins. These bobbins can be forced back into shape with a press.

Anti-friction spindles at this same mill were difficult to plumb before the rubber washer at the base of the spindle was changed, but they now give satisfactory service.

One mill spinning numbers for osnaburg has by-passed the problem of cut paper tubes to a large extent by reeling waste yarn from the tubes, which are not tapered. If the yarn is too tangled for reeling, it is cut from the tubes, but only one careful operative is allowed to do this, and it is done out of sight of other employees. No other cutting is allowed.

This mill also uses a few thousand aluminum bobbins. Doffing was slow at first, but reached standard after doffers became accustomed to the new bobbins.

Paper tubes have been found satisfactory at **Mill D**, although they require expensive adapters on the spindles and changes on the spooler conveyor to prevent telescoping. The mill therefore prefers wooden bobbins. This mill increased amount of yarn on package from 4.88 oz to 6.72 oz with larger rings, longer bobbins, and anti-friction spindles. Power consumption was decreased 17 per cent. With other savings, the anti-friction spindles will be amortized in 15 years. Change to larger rings alone is amortized in 3⅓ years.

A noncorrugated paper tube is preferred at **Mill L**, since it is easier to strip at the spooler and causes fewer ends down at doffing. This tube has no ferrule on the ends.

Most of the reporting mills either increased spinners' side assignments or did not change them at all on going to larger packages. **Mill P** decreased side assignments 7 per cent, because of the increase in operational time in putting up an end on a 12" bobbin, compared to an 8¼" bobbin. Number of sides doffed was decreased 16 per cent, but doffing costs were reduced from $0.00646 per pound to $0.00371 per pound because of the larger package.

Mill W increased the doffing cycle 26 per cent by adding ¼" to the length of the bobbin and doing away with the shoulder at the bottom of a conventional bobbin.

Lubrication of Drafting System. Several methods for reducing or eliminating oiling of the drafting system have been tried by Georgia mills:

Mill A has installed grease fittings on each stand. These stands are greased every 144 hours. Top rolls are picked every 24 hours. Front top rolls are oiled every 24 hours, middle and back rolls every 144 hours, and middle and back steel rolls every 144 hours.

CARDING-SPINNING FORUM

- Large-Package Spinning
- Lubrication of Drafting Systems
- Weight Measuring Devices for Top Rolls

Mill C has tried two types of wooden saddles. These are not oiled, but are not entirely satisfactory; it is thought that they may be a cause of unevenness. Two brands of anti-friction rolls were found to be unsatisfactory, but with a third the roll picking cycle has been extended from 24 hours to 120 hours.

Mill R installed a long draft system with needle bearing front and middle top rolls. This is oiled every six months, and is considered satisfactory.

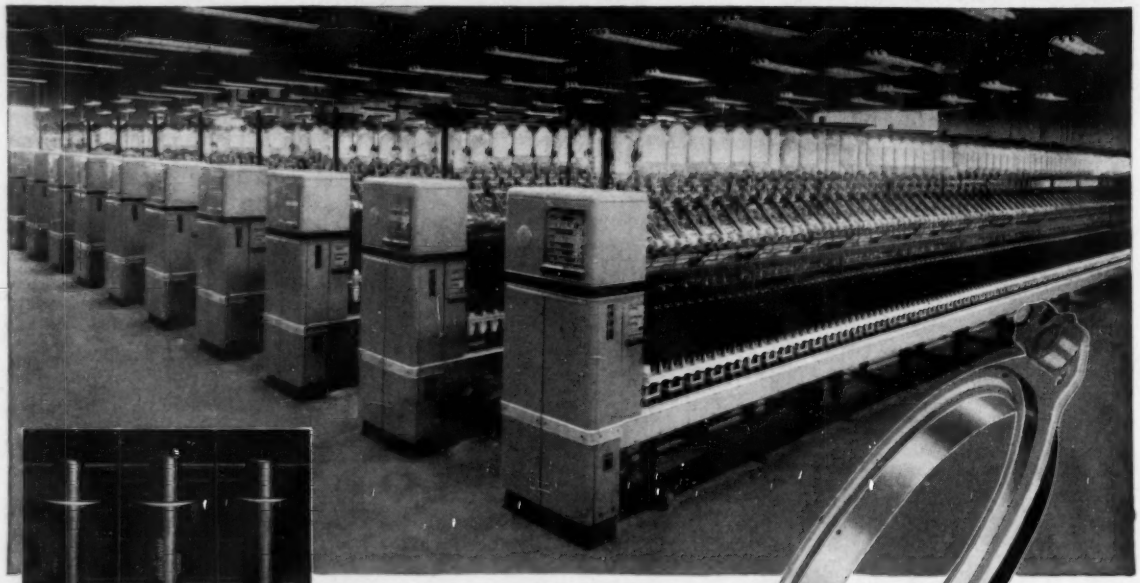
Mill T has nylon-tipped top rolls on the middle lines and ball bearing top rolls on the front lines. Roll picking on the middle lines became harder because of the dryness of the rolls, but this difficulty was eliminated by oiling once a month with lard oil. Over-all picking became much easier because of less attraction of lint and dirt than with the oil formerly used. Roll picking frequency was not changed, but the mill feels that yarn quality was improved.

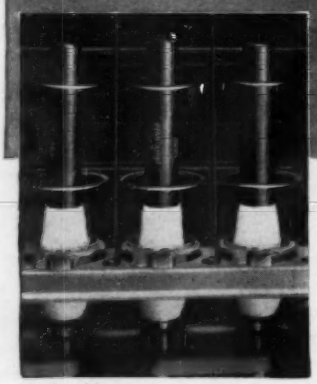
Mill V has obtained best results to date with impregnated wooden bearings in the cap bars and saddles, used in conjunction with steel top roll arbors. These cap bars and saddles are oiled every 488 hours; conventional cap bars were oiled twice a week. Cleaning time has been reduced 30 per cent. Top rolls are picked every 46 hours with the wooden bearing cap bars, every 23 hours with conventional cap bars Cloth grading tests show fewer filling gouts on the frames with the new cap bars.

Weight Measuring Devices for Top Rolls. Five mills reported experience with devices for measuring the weight on spinning rolls. One mill tried several such devices and found them all unsatisfactory. Two mills complained of excessive expense or slowness.

Two mills use weight measuring

DELAWARE MILLS





Says Mr. William C. Appleton, President of Delaware Mills, Inc., "We are well satisfied with our HERR Conical Rings both on spinning and twisting."

Herr Conical Rings are used on these new Saco-Lowell GWALTNEY Spinning Frames. They are also used on Delaware Mills — Universal Winding Company 10B Twisters.

The HERR Conical Ring provides ideal conditions for the spinning or twisting of any yarn.

Produce High Bulk Orlon at Increased Speeds and with Improved Quality by Using . . . .

HERR CONICAL RINGS

Equip with HERR Conical Rings and begin to enjoy these profit making features. You can speed up production, improve quality and lower costs with HERR Conical Rings. You'll gain too, many other advantages. They stop yarn breakage, permit heavier doffs, produce smoother yarns and reduce fly. You'll enjoy cleaner yarn because oil is not thrown off. Frames and room floors stay cleaner. Travelers last longer because oil is carried in capillaries to ring surfaces. Maximum spindle speeds are achieved.

Learn more about these wonder rings. Write today for descriptive literature.

FOR SPINNING AND TWISTING WORSTED, WOOLEN, RAYON, NYLON, ORLON AND BLENDED YARNS OF ALL TYPES

HERR MANUFACTURING CO., INC.

310 Franklin St., Buffalo, N. Y.

Study Shows Gains for Women's Wear Woolens in 1954

A continued rise in the importance of woolens and a marked trend toward lighter-weight constructions are revealed in an analysis of 1954 production of women's and children's woven wool fabrics, issued recently by The Wool Bureau. The analysis brings up to date a survey of fabric trends compiled last fall by the Bureau's department of economics and statistics.

Further increases in the importance of woolens brought their share of total women's wear wool fabric output to 88% in 1954, compared to 83% in 1953 and a postwar low of 73% in 1948, the Bureau says. The shift toward woolens continued without exception in any weight category, the Bureau notes.

The trend toward fabrics of heavier weights noted in last year's study was sharply reversed, the survey of 1954 output reveals. This shift may portend the decline of bulky woolens in favor of smoother fabrics, the Bureau says, noting that when the fashion cycle is complete, worsteds will recover some degree of their early postwar importance on the women's fashion scene.

Men's Wear Fabrics. The production of men's and boys' woven wool fabrics is steadily becoming more concentrated in the 9-13 ounce weight range, The Wool Bureau noted.

Fabrics weighing between 9 and 13 ounces accounted for 61% of total 1954 production of all constructions, compared with 52% in 1953 and a postwar low of 38% in 1948, The Wool Bureau says.

There was a continuing trend toward fabrics of woolen construction. An important exception to the trend occurred, however, in the category of fabrics weighing less than 9 ounces. Here worsteds made a sharp recovery.

Judging from trade reports on orders being placed for worsteds for fall, 1955, and spring, 1956, the Bureau says that the trend in favor of woolens may have reached its peak in 1954.

A marked rise in the production of regular-weight suits for spring, 1955, indicates that retailers may have been "understocking" suits in this category in recent years, the Bureau believes.

Double-Tiered Creel Saves Space

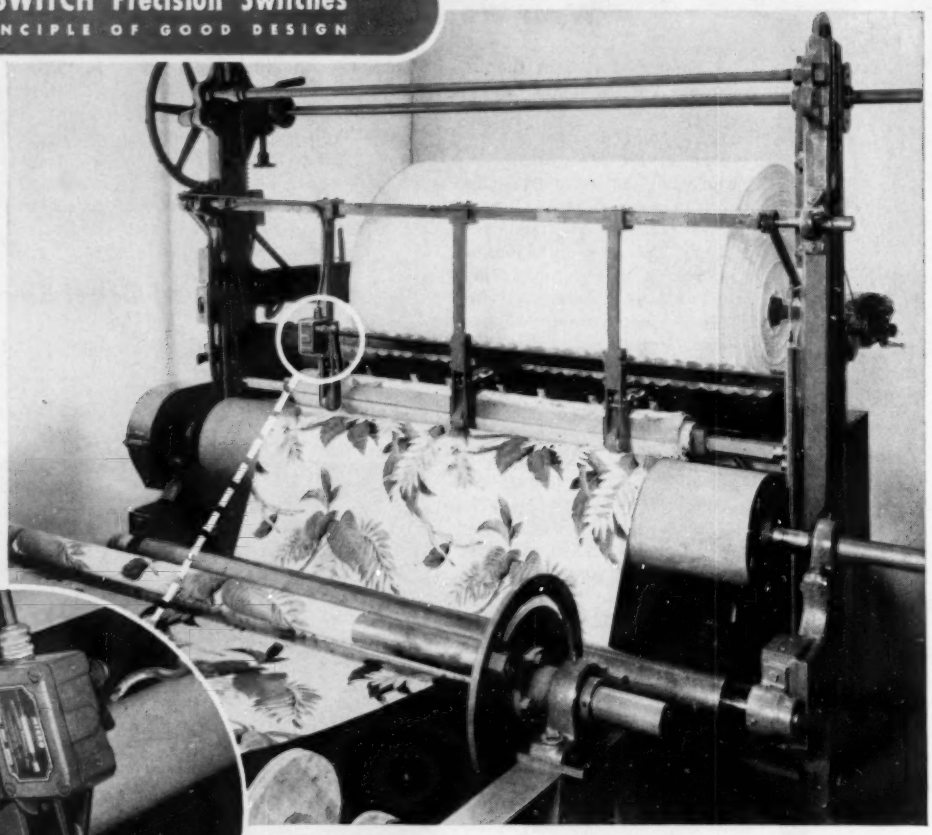
Built by mill personnel, this silk system creel reduces usual floor space requirements one half by placement of bobbin pins in two levels. The creel, holding 608 packages, is used in conjunction with an 8-yard horizontal warper.

devices successfully. **Mill T** made a simple weight measuring device (see illustration on page 107) which was copied from one used by a major machinery manufacturer. It gives satisfactory results when measuring the weight on any one roll or on all rolls together.

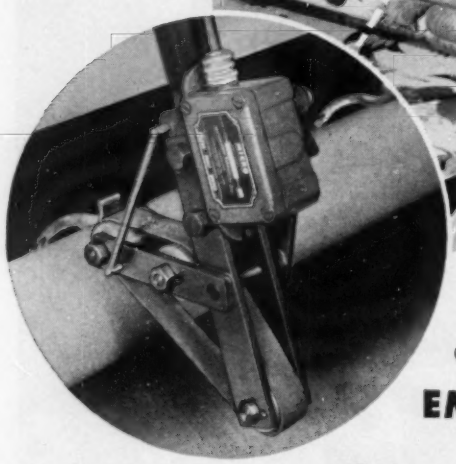
Cycle vs Spot Doffing. Of 19 mills describing their doffing method, 9 prefer spot doffing, 5 prefer cycle doffing, and 5 use both. Most of the mills using spot doffing run several counts, and feel that this is the only way to get maximum production when doffers have more than one count on their assignment.

Mills which prefer cycle doffing try to group numbers with approximately the same running time, although this is not always possible and it is sometimes necessary to short-doff. Most but not all of these mills make an allowance in piece rates for additional interference, or pay by the hank.

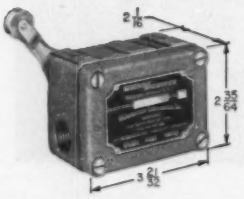
MICRO SWITCH Precision Switches
A PRINCIPLE OF GOOD DESIGN



Overall view of EMCO Rotary Cutter Winder. (Inset) This switch operates to control raising and lowering of the cutter frame.



3 switches help assure safe and automatic operation of this EMCO Rotary Cutter Winder



MICRO SWITCH limit switch is one of three switches used.

• Engineers of Eddystone Machinery Company turned to MICRO SWITCH for the small, compact, well-protected switches to control operations of their EMCO rotary cutter winder.

One MICRO SWITCH unit prevents operation of the cutter frame if the new shell is not in position. A second switch, capable of handling high inrush current, starts the motor which drives the rotary cutters. The third, a ruggedly housed unit, operates the solenoid pneumatic 4-way valve. This valve actuates the pneumatic cylinders to raise and lower the cutter frame.

Textile machinery, both new and now in use, is rapidly being made more automatic, safer and more productive by the installation of MICRO SWITCH units at strategic points. Expert consultation and advice—with no obligation—is available to manufacturers of textile equipment and to mill operators from 20 conveniently located MICRO SWITCH branch offices.

Switches for plant use and replacement may be obtained from authorized distributors located almost everywhere. Look under "Switches, Electric" in the Yellow Pages of your telephone book.

A complete line of snap-action and mercury switches

MICRO SWITCH provides a complete line of extremely reliable, small-size, high-capacity, snap-action precision switches and mercury switches. Available in a wide variety of sizes, shapes, weights, actuators and electrical characteristics. For all types of electrical controls.

MICRO SWITCH
A DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
In Canada, Leaside, Toronto 17, Ontario • FREEPORT, ILLINOIS

the guaranteed annual raise

or

"I want mine, and I don't care whom I take it from."

By Ringgold Arden
EXCLUSIVE

WE WERE discussing last month some aspects of the guaranteed annual wage demanded by the labor monopolies which control certain major industries. Let us not overlook the guaranteed annual *raise*, which is also a fundamental proposition with these monopolists.

Several years ago an automobile manufacturer signed a contract with the labor monopoly which absolutely controls the automobile industry, agreeing to this guaranteed annual raise. It may have been politic for the management to do this at the time that it was done, because they were looking forward to possibly five to ten years of exceptionally good business, and could not well afford a strike. It may have seemed expedient therefore to sell the customer down the river to placate the labor racketeers.

The basic principle on which American prosperity has rested for many years has been the production of better goods to sell for less money, and the customer was supposed to get the benefit of the technological advances. The labor unionists would put an end to any such foolishness as this, and insist that the employees in a plant, who had absolutely nothing whatever to do with the technological advances, get 100 per cent, or more, of the savings due to such improvements.

Both the guaranteed annual wage and the guaranteed annual raise result in swindling the general public, but there is no record of any kind of monopolist being interested in the general welfare. Many of these raids on the public are inspired by nothing more than the good old wholesome spirit of piracy, as practiced by the robber barons of Medieval Europe and the Barbary Corsairs and the freebooters which infested the China Sea. A lot of this, however, is forced upon the people who run unions from the nature of the union itself.

A great many persons who ought to know better are constantly referring to the "labor movement." This is about as descriptive a term as to refer to the "banking movement" or the "railroad movement" or the "filling station movement." Running a labor union is a business, exactly like running an insurance company, a bank, a textile mill, or any other business. The overwhelming necessity for every labor racketeer is to constantly get something for the people who pay tribute to his union *because* he gets something for them.

The annual raise, the pension plan, the various fringe benefits, and other shakedowns, are the "dividends" that labor racketeering pays to the people who support it, and time after time people will continue to support racketeers who have cost them plenty of money, instead of getting something for them.

This is a peculiarity of human nature which is hard to explain. It is that idiosyncrasy in the human mind which impels a man to fanatically follow some demagogue who is leading him to his ruin.

The labor racketeers in the northern states have almost completely destroyed the textile industry, and yet the members of the unions are still as fatuously attached to these people who continue to ruin them as if they had reaped great benefits from the rackets.

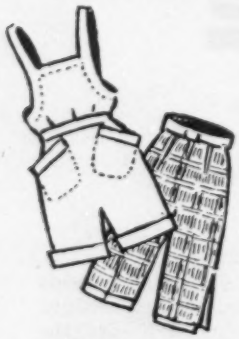
It is a notorious fact that very few strikes ever pay out if they last any length of time. Statisticians have figured that some of the most important strikes of the last ten or fifteen years only gained enough to permit the strikers to break even on the strike in five to fifteen years, and long before that time was up the racketeers were engineering new strikes.

The strike is a very peculiar in-

a DURABLE finish with Penford Gums

(U. S. Patent Nos. 2,516,632; 2,516,633; 2,516,634)

for permanent finishing, use these new starch ethers with resins



on

***sport denims!....**
***ginghams!....**
***sail cloth!....**
***and a *host* of other fabrics!**

PENFORD FINISHING GUMS*—highly chemically substituted starch ethers—in combination with urea formaldehyde and melamine resins—provide *lasting* results!

Get

***a *permanent* hand!**
****lasting* crush-resistance and dimensional stabilization!**
***higher breaking strength and abrasion resistance!**

Technical Sales Service Engineers from PENICK & FORD are available to work with you to develop PENFORD FINISHING GUMS formulations to supply the specific permanent finishes *you* desire for your fabrics. Write, wire, or phone for prompt service.

PENICK & FORD, Ltd., Inc.

420 Lexington Avenue, New York 17, N. Y.

806 Bona Allen Building, Atlanta, Georgia — Cedar Rapids, Iowa

Send for this helpful brochure!

Penick & Ford, Ltd., Inc., 420 Lexington Ave., New York 17, N. Y.
Please send your helpful PENFORD GUM brochure.

NAME _____

POSITION _____

COMPANY _____

ADDRESS _____

stitution in itself, as we have frequently remarked. It is legalized extortion, and legalized rioting. A strike is a conspiracy to cause damage sufficient to induce an employer to grant the demands of his employees as the lesser of two evils. When the mere cessation of work and the refusal to let anybody else do it can not bring an employer to his knees, a little dynamiting and arson are thrown in for good measure.

We have just seen a horrible example of labor racketeering at its very worst in the recent strike on a railroad, where bridges have been burned, tracks blown up, and trains wrecked. According to what we have been told by employees of the railroad, and what we saw in the newspapers regarding this strike, it was called to force the railroad to arbitrarily require all of its employees to pay so much a month more for some insurance than the price at which the railroad had agreed to provide it.

Some of these employees assured us that a very large percentage of the employees were bitterly opposed to this compulsory insurance, and also felt that if it had to be forced upon them, they ought to get it at the lowest possible price. This matter is now* being arbitrated, as if a thing of that sort could be arbitrated.

This matter of "arbitration" is a favorite device of the labor racketeers to get by devious means what can not be had openly. There is no rational basis for arbitrating a demand for something one of the parties to a proposed agreement refuses to grant. It is logical and reasonable to arbitrate an honest difference of opinion about the terms of a contract already in effect, but a thing like a wage increase or a pension plan is not a proper subject for arbitration, for the perfectly obvious reason that one side is making all of the demands, and the other side never asks for anything except to be left alone.

When you undertake to arbitrate wage demands, or demands for other benefits, the question of the guaranteed annual raise comes up, and the labor racketeers merely ask for a little bit more than they expect to get. Then, if they can get this to "arbitration," they can't lose.

They may not win, but they can't lose, and in the long run they will win, because the very nature of arbitration implies compromise, and an arbitrator will nearly always give something to the people demanding something, and all they have to do is to demand enough more than they hope to get to ultimately come out with a very handsome gain at the expense of the poor, groggy public, which pays and pays and pays, as these tightly organized rackets endeavor to build up a new type of economic royalist.

The telephone strike is another excellent example of how thousands of people are persuaded to lose millions of dollars in wages in support of something that can not benefit them, and is only of advantage to the people who run the unions. While it has not been possible for us to get a complete explanation of what this telephone strike is all about, it would seem from the newspapers that the telephone company is making what should be a very reasonable request in insisting that any contract be binding upon the union.

The union apparently does not wish to enter into any such agreement, but reserves the right to call a strike at any time over whatever interpretation of the contract it chooses to make.

This is really a peculiar controversy because it is virtually impossible to make a labor union abide by the terms of a contract. A labor contract is nothing more than an agreement to work, and in this country you can't *make* people work. Since labor unions are usually financially irresponsible, there is practically no way to collect damages for injury caused by union activities.

The union racketeer is strictly calling a "heads I win; tails you lose" game. His salary goes on whether the members of the union are on strike or not, and about the only chance he has to lose is by destroying the business from which he collects his dues. He has to take this chance, however, because, as previously mentioned, he has to constantly get something for his people.

He has a good job, paying him several times what he could make doing anything else, and he knows that when he doesn't get the annual raise, or benefit of some sort, he will probably lose that job to someone who will promise to get it. How much damage has to be done in the trying is not of particular moment to the man anxious to hold a good job. He may ruin a town or a state industrially, but it will take several years to do it, and meanwhile he flourishes.

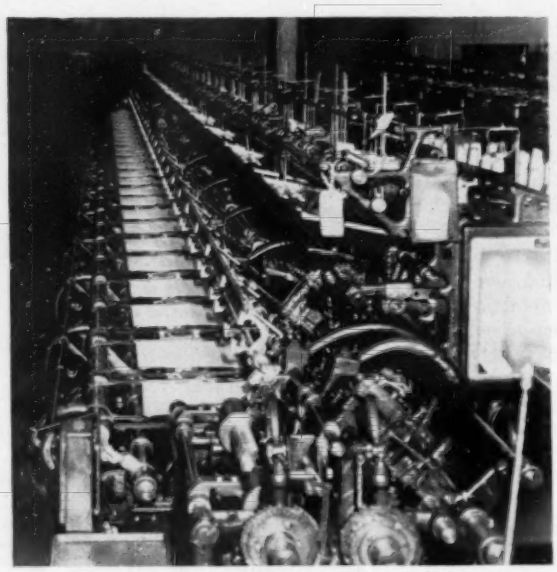
We know of very few textile mills that moved down South from the North, which came for any other important reason except to get away from the racketeers. The situation was perfectly described by the general manager of a large concern with a plant in the North and another one in the South, who remarked a few weeks ago that it was a joy to visit their southern plant.

This company had the same wage scale, pension plan, vacations, and other details of operation at both plants; but in the South the people liked their jobs and worked at them industriously. In the northern plant the people disliked their jobs and did as little work as they possibly could. The southern plant therefore was turning out far more goods per employee than the one in the North, and this gentleman said that it was only a question of time until the northern plant must move to the South.

Needless to say, there was no labor union in the southern plant, but these labor racketeers are an industrious bunch, and since the profits are high, they never give up. They are always around peddling their one stock in trade—discontent—and trying to sell working people on the idea that there is really no such thing as good wages and working conditions. It is all a matter of how much you can blackjack out of the employer, and let him in turn squeeze this out of the public.

For the past 20-odd years we have been determining wages and prices by politician instead of competition.

*May 20, 1955



WELTS OF THE HOSIERY on this knitting machine are so even that they appear to have been set to a chalk line. Evenness results from using turn rings on glass floats for the splicing and welts, and using very little tension on either welt or splice snappers.

10-point program to control

HIGHER overall percentages of first quality stockings are produced at Wisteria Hosiery Mills, Gastonia, N. C., as a result of several unique features incorporated in the knitting operation, plus a system for controlling and double-checking length variations in the finish boarding and in the finishing department.

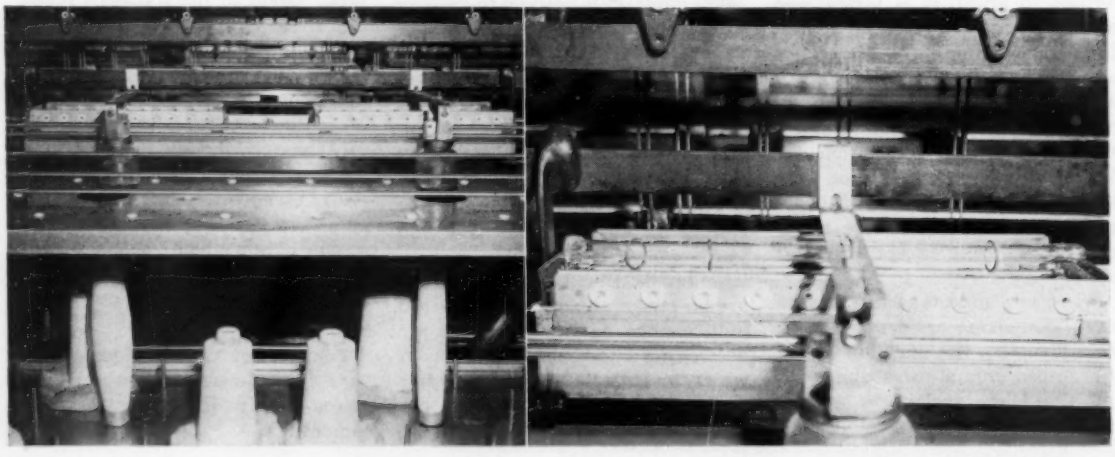
Control System. The system for controlling finished stocking lengths to ± 1 inch consists of the following steps:

1. Running the 15-denier unthrown nylon yarn from pirns.
2. Cutting 3-inch holes in the yarn boxes above the pirns.
3. Eliminating snappers by using turn rings and glass floats.
4. Running yarn through water and trough solution instead of oil.
5. Maintaining air conditioning at 84 F and relative humidity at 52 per cent.
6. Keeping trough solution clean, thoroughly mixed, and acid-free.
7. Eliminating all oil-wicks, since they cause uneven tension.
8. Having boarders pull heels and welts to scale lines.
9. Checking test lots for length variations in the boarding department, and double-checking the same lots at finished inspection.
10. Maintaining close cooperation between all departments involved in the length control program.

The unique features of eliminat-

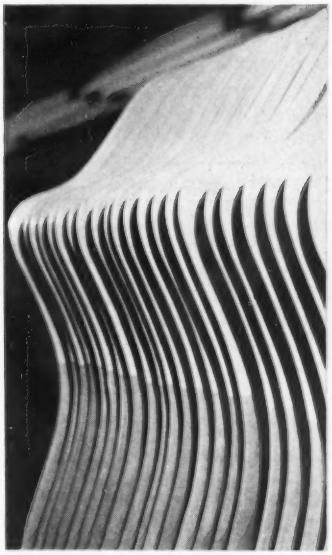
1 **HOLE CUT IN YARN BOX** directly above pirns allows 15-denier nylon yarn to balloon freely as it is pulled from the pirns, preventing the unevenness in tension which causes variations in stitch length.

2 **MOISTENING TROUGH,** showing yarn running through water instead of oil. This method eliminates need of snappers for yarn tension. Glass float has a square end to prevent it from turning; end fits into recess at left of trough.



f-f hose length

By George Burnett
Wisteria Hosiery Mills, Inc.
EXCLUSIVE



HEEL SECTION of a boarding rack filled with test stockings. Note the even line of heels, none of which varied more than ⅜ inch from the 6-inch standard.

ing oil and oil-wicks has a tendency to increase production, rather than affect it adversely.

The knitters wear cotton gloves in placing the knitted dozens on the carrier rods at the ends of the machines, which prevents many picks. The day's production will next be placed on a specially constructed truck, and then will be placed in a steam box for pre-setting before the seaming process.

Running Nylon Yarn from Pirns. Photo number **1** illustrates a 3-inch hole cut in the yarn box directly above the pirns; the center for the hole is the porcelain eyelet which was first removed before cutting. A die is available on the market for cutting holes in conduit boxes; this tool is suitable for making the holes in the yarn boxes. The holes are shown directly below the oil jars; however, the oil jar guides are used in threading, but no oil is used in them as the wicks have been removed.

The chief advantage of cutting the large holes in the yarn boxes is to allow the 15-denier nylon knitting yarn to balloon freely as it is pulled from the pirns, thereby preventing any unevenness in tension which would cause variations in stitch length in the knitted fabric. The small eyelets in the yarn boxes often act as a brake in the free unwinding of yarn from the pirns, and this is a direct cause of much unevenness in length of the finished stockings. The unsized, unthrown, no-twist, 15-denier knitting yarn wound on pirns is about 20 per cent lower in cost than the conventional yarn wound on cones, so the enlarged holes allow a considerable saving by making the use of pirn yarn practical.

Turn Rings and Glass Floats Are Used. Photo number **2** is a close-up of a moistening trough, showing the yarn running through water instead of oil, and employing the use of turn rings and glass floats. This method eliminates the use of snappers for yarn tension. The glass float, which has been raised out of the trough for the illustration, has a square end to prevent it from turning, and which fits in

3 **THESE STOCKINGS** were preboarded for quick testing. Length variation was less than ½ inch.

4 **LENGTH MEASUREMENTS** of test lot are checked by forelady. Measurements are compared to standard and are entered on chart shown on page 122.

INSPECTOR'S REPORT

Date _____

Style 593 Color Ecstasy Style 593 Color Ecstasy

Size 10 Inspector _____ Size 10 Inspector _____

Mch. No.	Lg. In. O'All	Lg. Heel	Lg. Welt	Lg. Shdw.	Mch. No.	Lg. In. O'All	Lg. Heel	Lg. Welt	Lg. Shdw.
3	32½	6	3½	1¾	4	32⅝	6	3⅝	1⅞
	32¾	6	3⅜	1¾		32¾	6	3½	1⅞
	32½	6¼	3½	1⅞		32¾	6	3⅜	1¾
	32½	6⅛	3⅜	1⅞		32½	6	3⅝	1⅞
	32⅛	6	3½	1⅞		32½	6	3½	1¾
	32½	6¼	3½	1⅞		32½	6½	3⅝	1¾
	32¼	5⅞	3½	1¾		32½	6⅛	3½	1⅞
	32½	6⅜	3⅜	1¾		32¼	6⅛	3½	1¾
	32⅜	6	3½	1⅞		32½	6⅛	3½	1⅞
	32½	6	3⅝	1¾		32¾	5⅞	3⅝	1⅞
	32¾	6⅛	3½	1⅞		32¼	6⅜	3⅜	1¾
	32¾	6¼	3⅜	1⅞		32½	6¼	3⅜	1¾
	32½	6¼	3½	1⅞		32½	6	3⅝	1¾
	32½	6⅛	3¼	1⅞		32⅝	6⅜	3⅝	1¾
	32⅝	6	3⅜	1⅞		32½	6¼	3½	1⅞
	32⅜	6¼	3⅜	1¾		32¾	6⅛	3½	1¾
	32⅜	6⅜	3⅜	1¾		32⅝	6⅜	3½	1⅞
	32½	6¼	3⅜	1⅞		32⅜	6¼	3⅜	1⅞
	32½	6	3½	1¾		32⅜	6¼	3¾	1⅞
	32¼	6⅛	3⅜	1⅞		32¼	6¼	3½	1¾
	32¼	6⅛	3¼	1⅞		32¼	5⅞	3¾	1⅞
	32¼	6⅛	3½	1¾		32½	6	3⅝	1⅞
	32⅜	6	3½	1¾		32½	6	3⅝	1⅞
	32½	6¼	3⅝	1⅞		32⅝	6¼	3½	1¾
	32½	6¼	3½	1⅞		32½	6⅛	3½	1¾
	32⅜	6¼	3¾	1¾		32½	6	3⅝	1⅞
	32⅜	6	3½	1¾		32⅝	6	3¾	1⅞
	32½	6⅛	3½	1⅞		32¾	6	3½	1¾
	32½	6	3½	1⅞		32½	6	3½	1¾
	32⅛	5⅞	3½	1¾		32½	6⅛	3⅝	1⅞
	32¼	6	3½	1⅞		32¼	6⅛	3⅝	1⅞

LENGTH MEASUREMENTS are entered on this chart by forelady. Chart is given to superintendent of knitting, who takes whatever action is necessary to control length variations.

a recess in the end of the trough.

A turn ring is slipped over the round end of the float, and the yarn is threaded through the ring above the float at an angle; as the yarn is fed into the fabric it turns the ring, which prevents wear by constantly changing the wear surface. The bottom of the ring is in the trough solution, and as it moves it brings moisture to the top; the yarn travels at an angle through the ring, which automatically removes excess moisture, and prevents cutting of the glass float. A 3-inch hole has been cut in the yarn box under the glass jar for the purpose of feeding the pirn yarn through the oil jar guide, but no oil or wicks are used with this method of threading.

Pictured at the top of page 120 is a "Reading" knitting machine with the welts so even that they appear to be set to a chalk line. This evenness in the welts is the result of using turn rings on glass floats for the splicing and welts, with the welt snappers on the top rod with splice snappers, and using very little tension on either the welt or splice snappers.

The main snapper rod has been made inactive at all times, so there is no tension on the 15-denier main yarn except from the turn rings on the glass float and the tension rings on the guide wire. This gives a very uniform tension to the main yarn, greatly improving the selvages, and gives the knitted stocking a firmer feel; the firmer fabric is less easily picked, and seams better even after the steaming process.

With this method, we use 3 pints of agent to 50 gallons of water. This is much cheaper and cleaner than using oil and wicks. It also prevents waste in filling oil jars, which is time consuming for the knitter. The pH of the solution is tested frequently to keep it free of acid; it is kept in uniform mixture in the 50-gallon drum by means of a jet of compressed air metered through a copper tube, coiled in the bottom.

Testing. A test stocking is taken from the heads of all knitting machines each week. The test lots are identified by master-tickets marked "sample," which follow the stockings from knitting through seaming, inspection, and boarding to the finishing department.

The knitting superintendent personally supervises boarding of the test dozens, and at the same time carefully checks for length variations in the knitting. We actually measure the stockings for length control, and have discarded the method of counting courses which produces uncertain results. Of course, all stockings are knitted to a predetermined number of courses between points in the stocking specifications.

Photo number **3** illustrates a dozen pairs of stockings which have been preboarded for the purpose of quick testing. As can be seen by the even line of welts at the bottom of the forms, none of the stockings varied over ½ inch in length.

Pictured at top of page 121 is the heel section of a boarding rack dressed with test stockings. This test lot was preboarded before dyeing so that the corresponding number of the knitting machine head, written with crayon on the welt of each stocking, could be determined in order to make any necessary knitting machine adjustments. Note the even line of heels, none of which varied over ⅜ inch from the 6-inch standard. We find that length variation control also depends to some extent upon proper boarding to a size scale for length.

All the boarders are instructed to pull the heels and the tops of the welts to scale lines scribed on the boarding forms. The heel scale

Pointers on Processing 8 and 15 Denier Rayon on Cotton System

Mills processing 8 and 15 denier rayon carpet staples that are currently being used in volume by the tufted industry are strongly urged to handle them in a prescribed manner to avoid variations in the dye absorption from end to end in the cut pile tufted carpets. Following are some recommendations for cotton system mills:

Opening. Use the staple on a "first in, first out" basis. Blend within a given lot by using fiber from several bales—it is suggested that 12 bales be used to make the blend, with four one-quarter consumed, four one-half consumed, and four three-fourths consumed.

Open bales at least four hours before fiber is needed to allow staple to bloom in a relative humidity of about 60%. (Processing is improved with controlled temperature and humidity of 85 F and 55-60 rh from picking through coning.)

If staple is stock dyed with vat colors, producer finish is removed; so it is necessary to add a processing lubricant in the final rinse.

Pickers. Use Kirschner type beaters set ½" from feed rolls for 3" staple, ¼" for 1 9/16" staple; operate at 900-950 rpm. Fan speed, 1400 rpm. Less calender roll pressure is usually best so that small clumps of staple will not get pulverized or form buttons. Use of crimped fiber is recommended to prevent lap splitting. Production should be about 450 pounds per hour on 16-ounce 45-pound lap.

Carding. Set feed plate for 3" staple at .034"; for 1 9/16" staple, .017". Use of long nose feed plate is optional with 3" stock. Use solid screens under licker-in, speed of which should be about 371 rpm. Hand strip clothing every eight hours. Set flats at .012" to .015"; doffer and licker-in to cylinder, .077"; doffer comb, .017"; and flat comb to flats at .012".

Production should be upwards of 20 pounds per hour on 65-70 grain sliver. Keep weights on heavy side.

Some reduction in amount of fly has been found by application of wax emulsions at the picker.

Drawing. Use four-roll cushion-top drawing or 3-over-4 drawing. For 3" fiber, roll settings are most important and from front to back should be 3⅛", 3¼", 3⅜". If these settings cannot be made, take one roll out and use settings of 3⅛" and 3⅜".

Fly Frames. A considerable poundage of rayon carpet yarns is being spun on fly frames. It has been found that it is more practical and economical to spin up to 2.0/1 or 2.5/1 on fly frames rather than ring frames.

.88/1 yarn is most often made on fly frames using two processes of roving with double creeling of the first process of roving. Most mills will find that use of 12 x 6 conventional slubber, having middle roll removed, works exceptionally well for 3" staple followed by either a 10 x 5 or 8 x 4 second process. Flyer speed is limiting factor here, and twists are reasonably low—3.75 twist multiple. Drafts on a two-roll frame should not exceed 5.0

Mills with long draft fly frames can, of course, make .88s in one operation, but two processes of drawing are recommended to give required number of doublings.

Spinning Frames. If processing 3" staple on frames equipped with Saco-Lowell Roth or Duo-Roth drafting, remove middle top roll; do not modify for the 1 9/16" staple. Whitin Super Draft and Saco-Lowell Z2 spinning are other frames currently being employed.

Spin limit for 100% 15.0 denier staple is about 5/1; for 8.0 denier, about 8/1.

Twisting. Twisters with rings 4" in diameter and larger are preferred because they reduce the number of splices in the finished package.

Winding. Precision wind and open wind packages are made, with the large cone size preferred. Use of lubricants on the final yarn, such as Avcosol 104, has proven beneficial—10% emulsion based on weight of solids is made up and fed to an emulsion trough by gravity. Mills without humidification find it advantageous to recondition the viscose to its proper 11% regain.

From paper by W. W. Bowman of Textile Research Department, American Viscose Corp., recently presented before the Carolinas Section of the American Society for Quality Control.

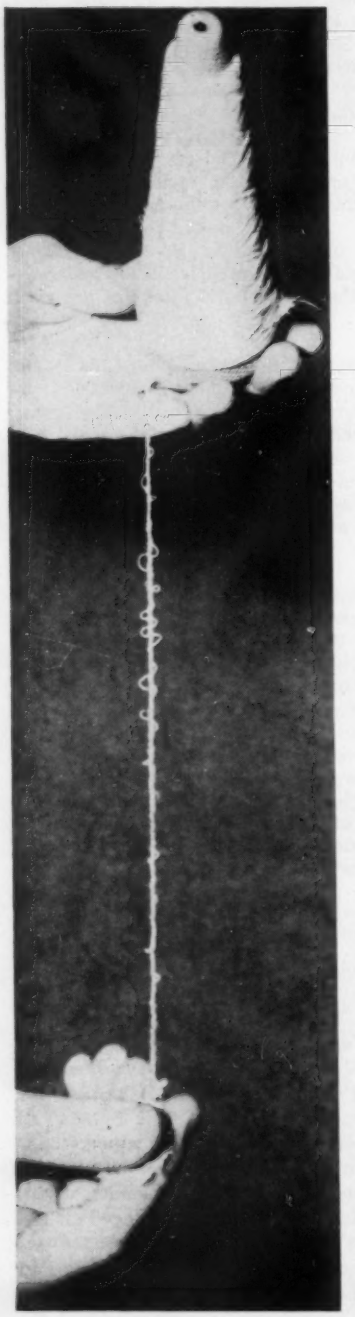
lines are scribed for 6-inch lengths; the welts on sizes 8½ and 9 are pulled to 31 inches, 9½ is pulled to 32 inches, and sizes 10, 10½, and 11 are pulled to a 33-inch mark. The stockings then automatically adjust to the correct length during the boarding process. The scale given above is for medium lengths only during boarding. We also knit "short" and "long" lengths, which must be boarded to different scales than above.

In the finishing department, the test lots are measured and double-checked by the floor-lady. The finished size scale for medium lengths is as follows: Size 8½ and 9 to finish 30½ inches; size 9½ to finish 31½ inches; and sizes 10, 10½, and 11 finish 32½ inches; all sizes given are plus or minus 1 inch.

Photo number **4** illustrates the floor-lady checking a test lot. She plots the finished measurements on a chart, which is shown on the opposite page. This chart is given to the knitting superintendent for whatever action may be necessary to control length variations. The charts are placed on file to control long-term variations from the established standards, and shows week-to-week results.

How Triangle Hosiery Co. makes

Cotton — Nylon Stretch



Staff Prepared
EXCLUSIVE

SOCKS made of a combination of cotton and stretch nylon have entered the market at the same price level as the all-stretch yarn number. This combination yarn sock is heavier and bulkier than all-stretch yarn socks, although the stretch feature is retained. The yarn differs from regular stretch nylon in that a strand of cotton is intertwined around the stretch nylon (see illustration).

These socks don't stretch as well when first removed from the knitting machines as they do a week later. The yarn is in the range of 250 denier and appears to be 70/2 stretch nylon with one end of 50/1 or 60/1 cotton.

Triangle Hosiery Company, Inc., High Point, N. C., has six to eight styles between men's and boys' socks, including ribbed and fancy plain knitted patterns. In the men's line, one size fits 10-13. In the boys' line, one size fits 7-9; another fits 9-11.

Men's socks will finish 9½" in foot; 9½" high. Boys' (small) will measure 6½" x 6½"; (large) 8½" x 8½".

Advantages. The following advantages are gained by using the cotton-stretch nylon yarns, according to R. O. Haas, vice-president of Triangle:

(1) Increased cushion for the foot.

(2) Much greater absorption (attributed to the cotton).

(3) Eliminates excessive friction on foot sole.

(4) Greater warmth due to the heavier weight and desirable thermal properties of the cotton. Clamminess due to excessive unabsorbed moisture is eliminated. Cooler in warm weather due to less friction on foot sole.

(5) Advantageous from health standpoint in that no blisters are caused, and fungus infection of feet is minimized by absorption of perspiration. Fewer allergies are aggravated with the blend.

COMBINATION YARN of stretch nylon and cotton imparts desirable features to the finished socks.

Tests. Wear tests showed that the socks gave exceptionally good service. The socks were worn 40 times with a wash each time before a hole appeared in the heel. There was no evidence that the nylon yarn cut the cotton yarn. Only slight pilling was noted after 40 wearings and washings.

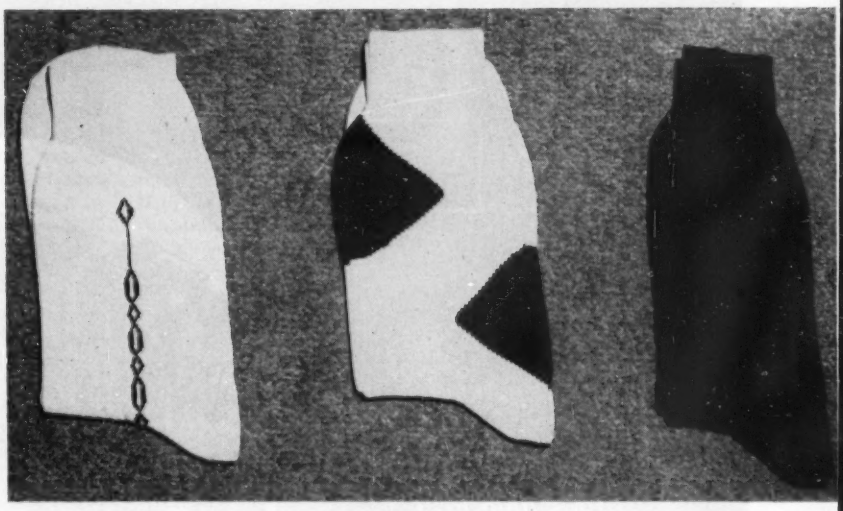
Knitting. Komets, HH spiral machines, and HH-PW machines are used to make these socks at Triangle. Banner wraps are adaptable but have not been used yet. Some samples have been run on Holdstitch machines.

176-needle machines are used as well as 160-needle and 220-needle machines. Patterns so far include diamonds, plain ribs, and clock wraps. However, any other patterns made on these machines could easily be adapted to the cotton-stretch nylon yarn. The machines used in knitting are usually limited to handling 30/2 cotton counts, since they are fine gauge.

Precautions. This combination yarn must be run with the stitches just as loose as possible. On HH machines, tension on yarn must be at a minimum while making diamond wraps or clocks to make the colors in the pattern as prominent as possible.

On Komets, the loose stitch is difficult to run; therefore more care must be observed in setting these machines to make the de-

Socks



THREE DIFFERENT MACHINES were required to make these samples. Left to right: clock pattern, diamond plait pattern, and Komet rib pattern.

sired size. The count of the yarn must be uniform for good results on Komets.

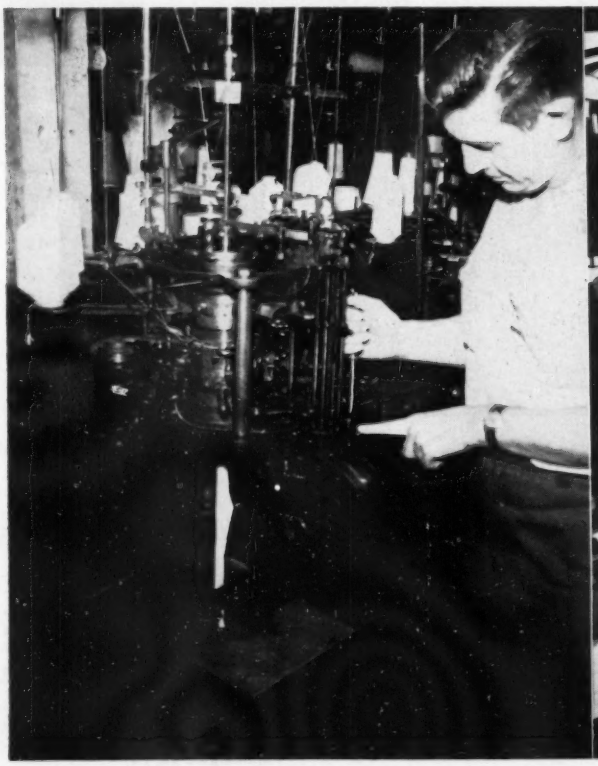
The sizing screw adjustments on Komets are especially delicate for this type of work. Tension on yarn also affects size more on Komets than on other machines. Tension must be set after trial and error. All settings on Komets must be made after trial and error because of differences caused by wear on stitch cams and other parts. For example, if stitch cams are worn, it is necessary to loosen the stitch by altering the setting of the sizing attachment and also by altering the amount of tension on the yarn.

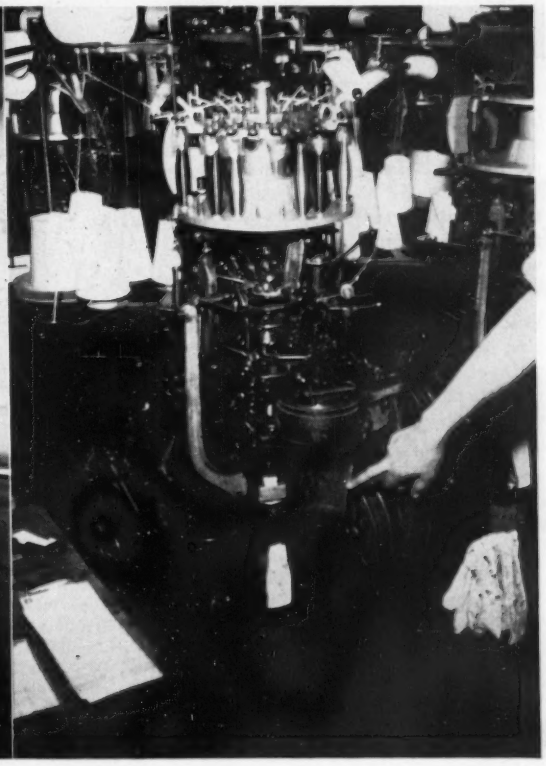
In knitting, this mill uses the same number of links on the cotton-stretch yarn sock and the all-stretch yarn socks, and the same amount of tension is used on the stitch.

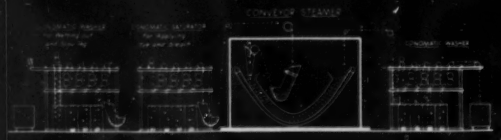
There are no special problems in knitting this combination yarn. It

LOOSE STITCHES ARE ESSENTIAL. The sizing screw adjustments on Komets are especially delicate for this type of work. Settings are determined by trial and error.

ROUGH EDGES cause seconds and are usually found on most makes of machines. Fixer checks fluted take-up rolls for burrs on HH-PW machine.







Installation View of Con-o-matic Washer in Continuous Bleach Range.

For improved quality of knit goods and profit making production . . . install a

PROCTOR CONTINUOUS BLEACH RANGE

Installation View of Steamer Unit in Continuous Bleach Range.

This range has been field proven, and is now producing highest quality tubular knits at the P. H. Hanes Knitting Co., in Winston-Salem, N. C. Through the use of a Con-o-matic Saturator, this range is adaptable to be used in applying fluorescent dye, which is one of the latest techniques of the knit goods industry.

Discuss the possibilities of adding a Proctor Con-o-matic washer to your present production set-up. The tapered squeeze rolls (Pat. app. for) assure a continuous trouble-free, tension-free operation.

Proctor engineers will be glad to discuss your knit goods problem with you at your earliest convenience. Why not present your problem to men who can help you.

WRITE FOR DETAILS—PROCTOR & SCHWARTZ EQUIPMENT FOR THE TEXTILE FIELD

AUTOMATIC BLENDING SYSTEMS • WEIGHING FEEDS • PICKERS • SHREDDERS • BALE BREAKERS • SYNTHETIC CARDS • GARNETTS • DRYERS FOR FIBROUS MATERIAL • YARN DRYERS • HOT AIR SLASHER DRYERS • CLOTH CARBONIZERS • ROLLER DRYERS AND CURERS • LOOP AGERS FOR PRINT GOODS • TENTER HOUSINGS • OPEN-WIDTH BLEACH SYSTEMS FOR WOVEN FABRICS • MULTIPASS AIRLAY DRYERS • NYLON SETTING EQUIPMENT • CON-O-MATIC WASHERS • CONTINUOUS BLEACH SYSTEMS FOR PRODUCING TUBULAR KNITS EQUIPMENT FOR "SEDIMANIZED"® SHRUNK-TO-FIT FABRICS • CARPET DRYERS

PROCTOR & SCHWARTZ, Inc.

Manufacturers of Textile Machinery and Industrial Drying Equipment. Philadelphia 20, Pa.

World Per Capita Fiber Consumption Figures

Reporting on data compiled by the Food and Agricultural Organization of the United Nations, the "Textile Organon" notes that the world average per capita consumption of fibers in 1953 was 9.0 pounds, an increase of 0.2 pounds over 1952, but the same as the 1951 figure. This compares with 8.1 pounds per capita in 1938, or 11 per cent less than the latest figure.

The United States continues by far the largest per capita consumer of textile fibers with the 1953 data showing 38.4 pounds as against 37.5 pounds in 1952 and 42.2 pounds in 1951. Canada was second with 26.9 pounds per person in 1953 and 25.2 pounds in 1952; Canada's peak year was 1951 with 29.7 pounds. Only two other countries, Sweden and the United Kingdom, had a 1953 per capita consumption in excess of 20 pounds.

The most striking feature of the data, according to the statistical bulletin of the Textile Economics Bureau, Inc., is the continuing enormous disparities in per capita consumption as between countries and regions. To some degree, these differences are explained by such factors as climate, local customs, and the like. However, it is clear the Organon states, that the main differences must be caused by the variances in income levels and standards of living.

In North America, for example, the average consumption in 1953 was 37.3 pounds per person, more than double the poundage in Western Europe, the next largest consuming area. At the other end of the scale, 1953 per capita consumption in Africa was only 4.0 pounds and in Asia 4.6 pounds.

is easily adaptable to any type of circular knitting machine.

Any sharp or rough object or edge on the machines will pick the yarn and cause seconds. Therefore, all burrs and rough edges must be polished and carefully avoided in running this yarn. Any machine already fixed to run nylon stretch yarn will run this type of yarn satisfactorily.

Dyeing and Finishing. In finishing the goods, this mill does not preboard. The socks are wet out in cold water, tumble dried, and then dyed. Then the process is the same as for all-stretch socks. The cotton-stretch yarn socks are finish boarded on size 11 boards if they are men's socks.

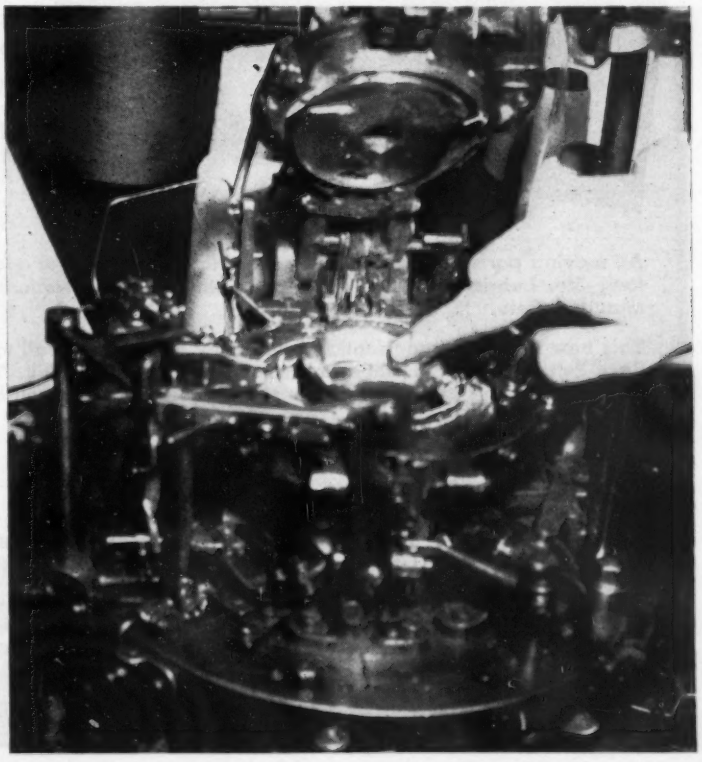
The biggest disadvantage noted for these socks so far has been the difficulty in getting a good union dyeing. Dark colors dye more easily than light colors. However, regular nylon dyes are used, and good unions on navies, dark browns, and similar dark colors have been obtained here. The dye bath temperature is maintained at about 180-190 F.

On plaited diamond patterns, resist acetate colors are used in the diamonds with regular nylon dyes on remainder of the sock. After the socks are knit they must be aged for at least 48 hours before dyeing and finishing. This gives the yarn time to relax.

Triangle is producing these styles for the current fall line for one of the larger chain store groups.

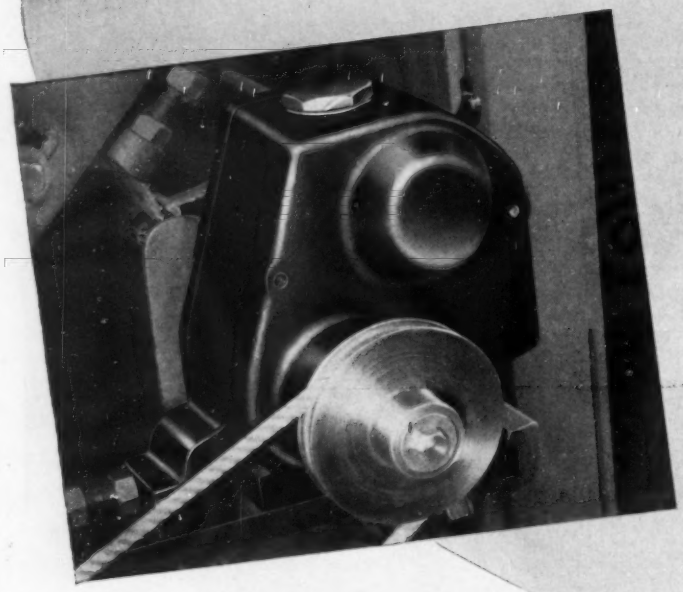
Despite inroads of stretch yarn in socks, there are far more cotton socks sold than any other kind. The combination yarn used is intended to make a better fitting sock that is more comfortable and longer wearing than the all-stretch product.

SHARP OR ROUGH EDGES snag the yarn and cause seconds. All burrs and rough edges must be polished for good work. On HH machines special attention should be given fabric tube inside knitting cylinder.



NOW.. from SACO-LOWELL

A NEW ANTI-FRICTION COMB BOX AND FOOT END ASSEMBLY



Completely redesigned in accordance with the best engineering principles, following closely the bearing manufacturers' recommendations, Saco-Lowell now makes it possible to eliminate costly and frequent replacement of comb box components.

This new comb box provides smoother, cleaner operation and requires virtually no maintenance. Oil leakage is eliminated through the use of oil-proof seals. No adjustments of any kind are necessary to compensate for wear. Power consumption is extremely low and operation is extremely smooth.

A special anti-friction bearing foot end stand is a vital counterpart of the new comb box assembly. For the first time, a micrometer-type adjustment, both vertically and horizontally, makes possible perfect alignment of the comb.

All moving parts are supported by anti-friction bearings of adequate size and capacity to assure long life. Lubrication is through a splash-type oil system, as recommended by the bearing manufacturers.

This new comb box and foot end assembly may be applied to old and new Saco-Lowell cards, Saco-Pettee cards and other makes of cards now in the mill. Another Saco-Lowell advancement that is continued proof "It Pays to use Genuine Saco-Lowell Repair Parts."

Remember— IT PAYS TO USE GENUINE SACO-LOWELL REPAIR PARTS

SACO-LOWELL

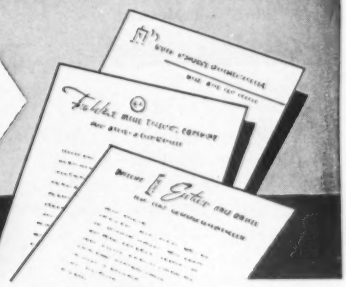
60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD and SACO, MAINE, and SANFORD, N. C.

SALES OFFICES: CHARLOTTE • GREENSBORO • GREENVILLE • ATLANTA

HOW OTHER MEN MANAGE

• Letters to Editor • Technical Discussion •
• Manufacturing Briefs • Kinks & Short Cuts • Comments from Readers •



Simplify Fabric Analysis With This Standard Form

EDITOR TEXTILE INDUSTRIES:

Mimeographed Fabric Analysis Work Sheets save considerable time in our design department, and insure accuracy of results.

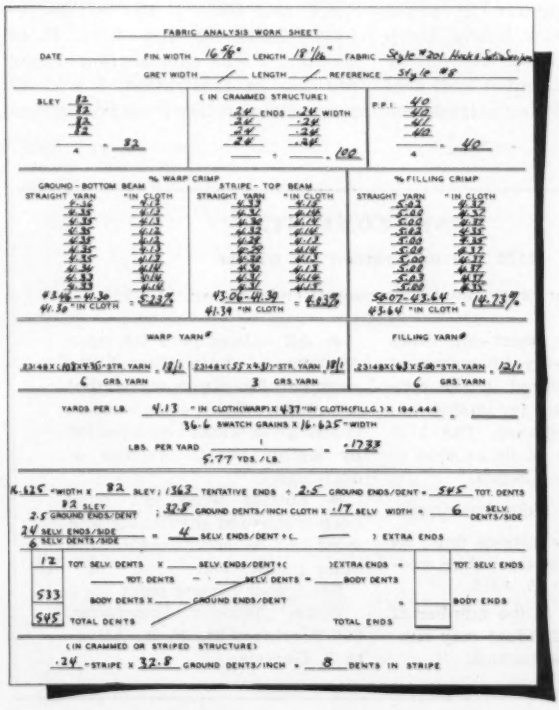
Primary data and calculations from our fabric analyses were formerly recorded on loose sheets. Results such as number of ends, yarn sizes, thread count, crimp, reed number, etc., were then transferred to a printed Fabric Construction Form. The steps of the various calculations not only took extra time but made the work sheets so untidy that checking was very difficult.

The new Fabric Analysis Work Sheets contain a step-by-step listing for the analysis of many types of fabrics. Primary data obtained from actual analysis is jotted down in the proper spaces provided by the equations on the form, and calculations are made as indicated by these equations.

Results of using these forms have been:

1. All computations are in the proper sequence.
2. Results are neat and easy to check.
3. The form is simple, concise, and inexpensive.
4. A reference file with complete details can be built up.

The accompanying forms illustrate our method. The form takes into consideration the various calculations that must be made for either a grey or finished cloth, for an even or crammed structure



FABRIC ANALYSIS WORK SHEET

DATE _____ FIN. WIDTH 16 5/8" LENGTH 18 1/16" FABRIC Style #201 Hicks Satin Stripe

GREY WIDTH / LENGTH / REFERENCE Style #8

SLEY 32 — (IN CRAMMED STRUCTURE) 24 ENDS × .24 WIDTH = 102 — P.P.I. 40 = 40

% WARP CRIMP — GROUND - BOTTOM BEAM: STRAIGHT YARN 41.30, "IN CLOTH 43.46 — STRIPE - TOP BEAM: STRAIGHT YARN 41.39, "IN CLOTH 43.06 — 43.46 - 41.30 = 5.233%

% FILLING CRIMP — STRAIGHT YARN 43.64, "IN CLOTH 50.07 — 50.07 - 43.64 = 14.73%

WARP YARN # 23/48 × 10/2 × 36/2 "STR. YARN 12/1, 6 GRS. YARN — FILLING YARN # 23/48 × (6/2 × 5/2)" STR. YARN 12/1, 6 GRS. YARN

YARDS PER LB. 4.13 "IN CLOTH (WARP) × 4.37 "IN CLOTH (FILLG.) × 194.444 = 36.6 SWATCH GRAINS × 16.625" WIDTH

LBS. PER YARD 1 = .1733, 5.77 YDS./LB.

16.625 "WIDTH × 32 SLEY; .1363 TENTATIVE ENDS ÷ 2.5 GROUND ENDS/DENT = 545 TOT. DENTS

32 SLEY ; 32.8 GROUND DENTS/INCH CLOTH × .17 SELV. WIDTH = 6 SELV. DENTS/SIDE

2.5 GROUND ENDS/DENT

24 SELV. ENDS/SIDE ÷ 6 SELV. DENTS/SIDE = 4 SELV. ENDS/DENT + C. ____) EXTRA ENDS

12 TOT. SELV. DENTS × ____ SELV. ENDS/DENT + C) EXTRA ENDS = ____ TOT. SELV. ENDS

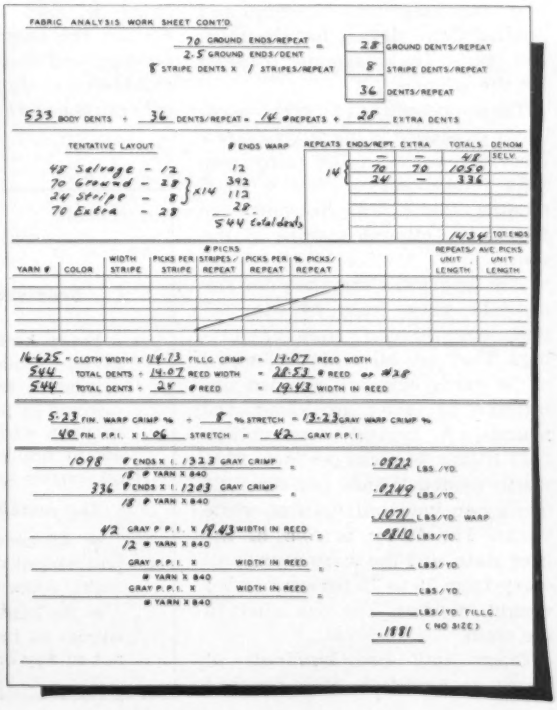
____ TOT. DENTS − ____ SELV. DENTS = ____ BODY DENTS

533 BODY DENTS × ____ GROUND ENDS/DENT = ____ BODY ENDS

545 TOTAL DENTS — TOTAL ENDS

(IN CRAMMED OR STRIPED STRUCTURE)

.24 "STRIPE × 32.8 GROUND DENTS/INCH = 8 DENTS IN STRIPE



FABRIC ANALYSIS WORK SHEET CONT'D.

70 GROUND ENDS/REPEAT = 28 GROUND DENTS/REPEAT

2.5 GROUND ENDS/DENT

8 STRIPE DENTS × 1 STRIPES/REPEAT = 8 STRIPE DENTS/REPEAT

36 DENTS/REPEAT

533 BODY DENTS ÷ 36 DENTS/REPEAT = 14 # REPEATS + 28 EXTRA DENTS

TENTATIVE LAYOUT	# ENDS WARP	REPEATS	ENDS/REPT.	EXTRA	TOTALS	DENOM.
		—	—		48	SELV.
48 Selvage - 12	12	14	70	70	1050	
70 Ground - 28	392		24	—	336	
24 Stripe - 8 ×14	112					
70 Extra - 28	28					
544 total ends					1434	TOT. ENDS

YARN #	COLOR	WIDTH STRIPE	# PICKS: PICKS PER STRIPE	STRIPES/ REPEAT	PICKS PER REPEAT	% PICKS/ REPEAT	REPEATS/ UNIT LENGTH	AVE. PICKS UNIT LENGTH

16.625 "CLOTH WIDTH × 114.73 FILLG. CRIMP = 14.07 REED WIDTH

544 TOTAL DENTS ÷ 14.07 REED WIDTH = 38.53 # REED or #38

544 TOTAL DENTS ÷ 24 # REED = 19.93 WIDTH IN REED

5.23 FIN. WARP CRIMP % ÷ 8 % STRETCH = 13.23 GRAY WARP CRIMP %

40 FIN. P.P.I. × 1.06 STRETCH = 42 GRAY P.P.I.

1098 # ENDS × 1 ÷ 1323 GRAY CRIMP / 18 # YARN × 840 = .0822 LBS./YD.

336 # ENDS × 1 ÷ 1203 GRAY CRIMP / 18 # YARN × 840 = .0249 LBS./YD.

.1071 LBS./YD. WARP

42 GRAY P.P.I. × 19.43 WIDTH IN REED / 12 # YARN × 840 = .0810 LBS./YD.

GRAY P.P.I. × WIDTH IN REED / # YARN × 840 = ____ LBS./YD.

GRAY P.P.I. × WIDTH IN REED / # YARN × 840 = ____ LBS./YD.

.1881 LBS./YD. FILLG. (NO SIZE)

(i.e., one with warp or filling stripes of greater density than the ground), and extra space is provided for check methods. Not all spaces and equations are necessarily used. The eight per cent stretch and 1.06 stretch factors are empirical values, used in certain of our products.

The results from the Fabric Analysis Work Sheet are transferred to our Fabric Construction Form, where other data are determined and various alterations made as a preliminary to cost estimates and weaving plans.

Although the form is of course specialized to suit our particular needs, a similar analysis form can be used to advantage by other mills, with only minor changes and rearrangements to suit specific requirements.

CONTRIBUTOR No. 8707

Reader Explains "Antiquated" Slashing Practices in India

EDITOR TEXTILE INDUSTRIES:

In TEXTILE INDUSTRIES for March (p. 144) you publish a letter from "I.D.," India, written to Messrs. Seydel-Woolley & Co., relating to size preparation. You describe it as "fantastically antiquated." The point you miss is the different type of cloth finish that is salable in those parts.

In a country of 357 millions, whose majority live in the "up-country" villages, and not in cities like Bombay, Calcutta, or Madras, there are many whose ways of life are stuck. They will only buy those cloths whose fancy colored labels ("chop") they can recognize. They buy longcloths (shirting) and dhoties (loin cloths) for the men, and saris (wrap-around dresses) for the women.

These people are very poor. Their existence is literally scraped from the earth in the rainy seasons (monsoon), or say 4 to 6 months of each year. No rains ever fall in the other 6 months of the year.

The longcloths they buy for the menfolk vary from 24" to 38" wide, boys' to men's sizes for shirtings. They are all made in lengths of 38 yards, and are shipped up-country in bales of about 400 pounds. A typical construction: 24/1 filling, 44 picks per inch; 20/1 warp, reeded 2 ends per dent, 24 dents per inch; all natural white yarns. The fabric is sold in the grey state, and the warp yarns will carry from 35 to 75 per cent added weight in sizing. The size is left in the cloth.

Every mill has hundreds of looms on longcloth. It is finished by damping with a starch solution, instead of water, which impregnates the filling and is allowed to lie for at least half a day. It is then calendered in one run through a heated 10-bowl swissing calender.

The finished cloth has a mellow, leathery feel, and may be partly polished on both sides. There is no bleaching or boiling.

The 10-bowl calender with a crew of 4 will process about 1,000 yards of longcloth an hour. It will run nonstop until the closing hour, and is then washed down. Any stoppage during production requires a washdown, since the size in the fabric, plus loose fibers, will make a wrap similar to paper around the calender bowls. Keep running and the wrap will not be troublesome; stop, and it will peel off onto the cloth being calendered.

Therefore the use of china clay, zinc, and magnesia to bind the starch or gums is a "must" in Indian mills, where 3 to 7 lb is added to every 10 lb of warp yarn passing through the slasher.

Indian methods will change only when education of the masses forces change, and not by any opinion of what is right in the U.S.A. or Britain.

The writer worked for many years in the textile mills in Bombay, and received his best lesson in philosophy from a "babu" Indian clerk. Like Dr. Seydel and your editors, I thought that such conditions should be reformed there and then. I was out to reform India in the first three months. I was constantly blowing my top in frustration. I was 27 years old, and like most young men

KINK CONTEST!

$100 will be awarded the winner

Send your entry now! This contest ends August 15, 1955

Every kink, short-cut, time-saver, or quality improvement suggestion entered in the contest will be paid for immediately upon acceptance. The $100 award will be made as soon as all entries are judged.

The contest rules are simple:

► All contributions must be postmarked not later than midnight, August 15, 1955.

► No limit to the number of entries an individual may submit in any one contest.

► All entries paid for upon acceptance — no waiting. Extra payment for photographs that are usable. Extra consideration is also given kinks accompanied by legible pencil sketches or drawings.

► Entries must not have been published previously and must not be submitted to any other publication.

Send your contest entry to: Editor TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 5, Georgia.

CARDING IS THE FOUNDATION FOR QUALITY

NO. 19

More Tips About Neps

All staples and grades of cotton have a certain percentage of immature fiber as well as neps made in the ginning process. Our Tip No. 7, "Tips on Reducing Neps Made on Cards", together with the suggestions below, will aid in reducing manufactured neps:

1. The cotton must flow freely through the opening, blending, and picking equipment. Every machine engaged in the processing of the raw cotton should be periodically inspected and corrections made where free flow of the stock is retarded. Suggested check points are: lifting aprons; combing or doffing rolls in hopper feeders; condenser screens and leathers; conveying systems, including pipe work; carding beaters with distorted pins; burred blades on beaters and burred grid bars; depressions and rough spots in beater and screen bonnets; improper fan speeds on pickers; burred and scarred feed rolls and calendar rolls on pickers and other opening equipment.

2. Draft on a card can vary, but there is always the right draft for your particular stock. Basically, draft is tied in with staple length; and as a general rule, you can figure short drafts for short cotton, medium drafts for medium length staple, and long drafts for long staple.

3. Not too much has been said about the effect of card drafts on nep count. A way to lower your nep count is to experiment with draft on your card to definitely determine, under your own conditions, the maximum draft that will give you the lowest nep count.

4. In making nep counts, it is suggested that you divide the web into thirds and determine the number of neps in three separate sections of web. You will be surprised to note the variation in nep count from right to left and center of the web. You can usually determine "why" nep count varies from either side to center of web and take corrective measures on settings, clothing or by grinding.

5. Keep running records, under card number, of every nep count made. When nep count increases between grinding periods, investigate that particular card when next ground, to determine cause of nep count increase.

NOTE: All rights reserved. Reprints, free of charge, on request to Ashworth Bros., Inc., Fall River, Mass.

please turn the page ▸

Ashworth

HEADQUARTERS FOR ALL CARD SUPPLIES

CARD CLOTHING • NAPPER CLOTHING

STRIPPING BRUSHES • FLAT CLEANING BRUSHES

BURNISHING BRUSHES • EMERY FILLETS

PEGS, PLUGS, CARD TACKS • CYLINDER BEARINGS

CARD GAUGES • TACK HAMMERS • WIRE PULLERS

FLAT SCREWS (H & B, SACO LOWELL, WHITIN)

CARD FLAT CHAINS (FOR ALL MAKES OF CARDS)

LICKERIN WIRES • GARNET WIRES

PLATT'S METALLIC WIRES

When you need card supplies, call or write our nearest plant. We have everything in stock as listed herewith. You'll find it convenient, time saving and economical to do business with "Headquarters". Ashworth Products are produced by American workers.

ASHWORTH BROS., INC.

American Card Clothing Co. (Woolen Division)

Fall River*†‡ Worcester‡ Philadelphia*†‡ Charlotte†‡
Greenville*†‡ Atlanta †‡ Dallas†‡ (Textile Supply Co.)
Los Angeles 62, Calif. (E. G. Paules, Representative)
*Factory †Repair Shop ‡Distributing Point

3 FACTORIES • 6 REPAIR SHOPS • 7 DISTRIBUTING POINTS

with a recently acquired technical education, thought I knew all the answers.

The babu gave me my lesson when one day he remarked to me:

"Sahib comes to India.

"Yes.

"Sahib worries.

"Yes.

"Sahib dies.

"Drink plenty of cold water and take your time."

Needless to say I did, and still do. Stop jumping to conclusions. Think out "why" first, and life becomes more pleasant and results easier to achieve. I don't think that India has changed much since those days.

"Bhote salaams" to I.D. for his T.I. effort at seeking information.

CONTRIBUTOR No. 8791
(Canada)

How to Ship Light Fabrics Without Damage

EDITOR TEXTILE INDUSTRIES:

We had a problem in crating scrim and other very light fabrics which cannot be run over a perch and which are shipped as they come from the loom. These fabrics must not be let telescope, or they will be ruined. We had to devise a crate which could be upended without harming the cloth.

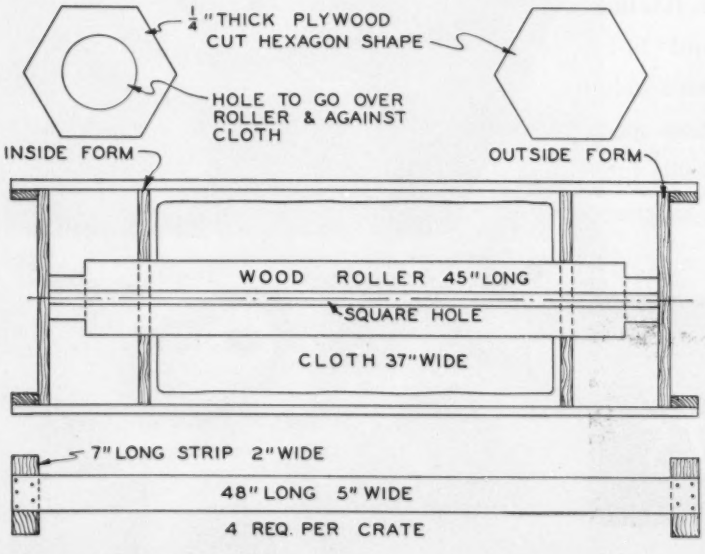
We wanted a crate without screws or bolts, and which could be shipped back without using much space. The accompanying illustrations show the crate that we devised.

The cloth is first wrapped in paper, and the end piece with the hole is fitted close to the selvages of the cloth on each end. The outer ends are then held to the end of the roller, and the four side boards

positioned and held firmly in place with steel strapping.

This method is efficient, quick, and protects the cloth under any handling likely to be met. Little space is taken up by the crates; and because no screws or bolts are used, they last indefinitely.

CONTRIBUTOR No. 8738



HOW OTHER MEN MANAGE

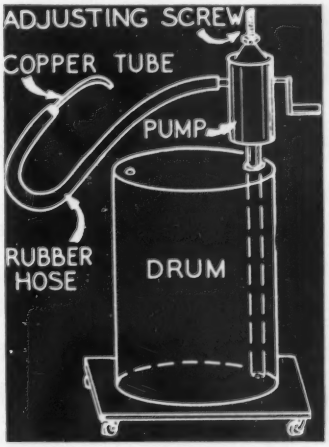
Easy Way to Oil Overhead Cleaners

EDITOR TEXTILE INDUSTRIES:

We have nearly 200 Parks-Cramer creel and ceiling cleaners in the spinning department of our mill. We oil them every four months.

We used to buy our oil in quart cans, and since each motor requires ¾ quart of oil, one man was kept busy opening cans and measuring oil each time we oiled the motors. We used a hand pump to transfer the oil from the measure to the motor; it required three or four pumpings for the ¾ quart.

We now buy our oil in 50-gallon drums. To save the trouble of measuring the correct amount for each motor, we attach a pump directly to the drum, as shown in the



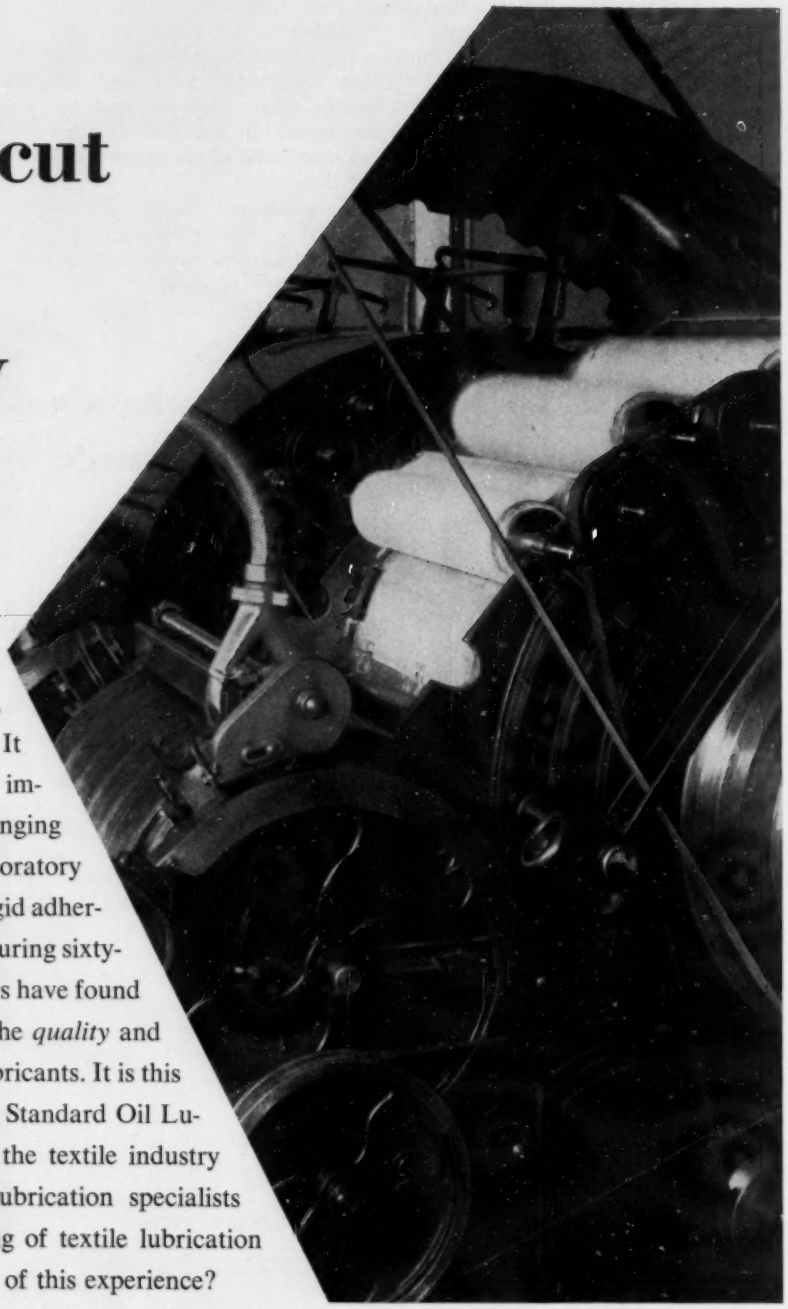
accompanying sketch. The pump is set to deliver exactly ¾ quart of oil at each turn of the handle.

A piece of ½-inch rubber hose about 6 feet long is attached to the pump, with an 8-inch length of ⅜-inch copper tubing at the other end of the hose. The copper tubing is bent so that it will easily go into the motor.

The drum is mounted on a caster-equipped platform, for

(Continued on page 139)

no short cut to quality



In the production of industrial lubricants, as of textiles, there is no short cut to *quality*. It is achieved by long research, improving each product to fit changing machinery needs, constant laboratory control to assure uniformity, rigid adherence to proven formulae. . . . During sixty-nine years' use, textile engineers have found that they can always rely on the *quality* and *uniformity* of Standard Oil Lubricants. It is this dependable quality that keeps Standard Oil Lubricants *first* in popularity in the textile industry throughout the South. Our lubrication specialists have a practical understanding of textile lubrication needs. Why not avail yourself of this experience?

STANDARD OIL
LUBRICANTS

The combined facilities for research, testing and engineering behind Standard Oil Lubricants are unequaled.

Standard Oil Company
(KENTUCKY)

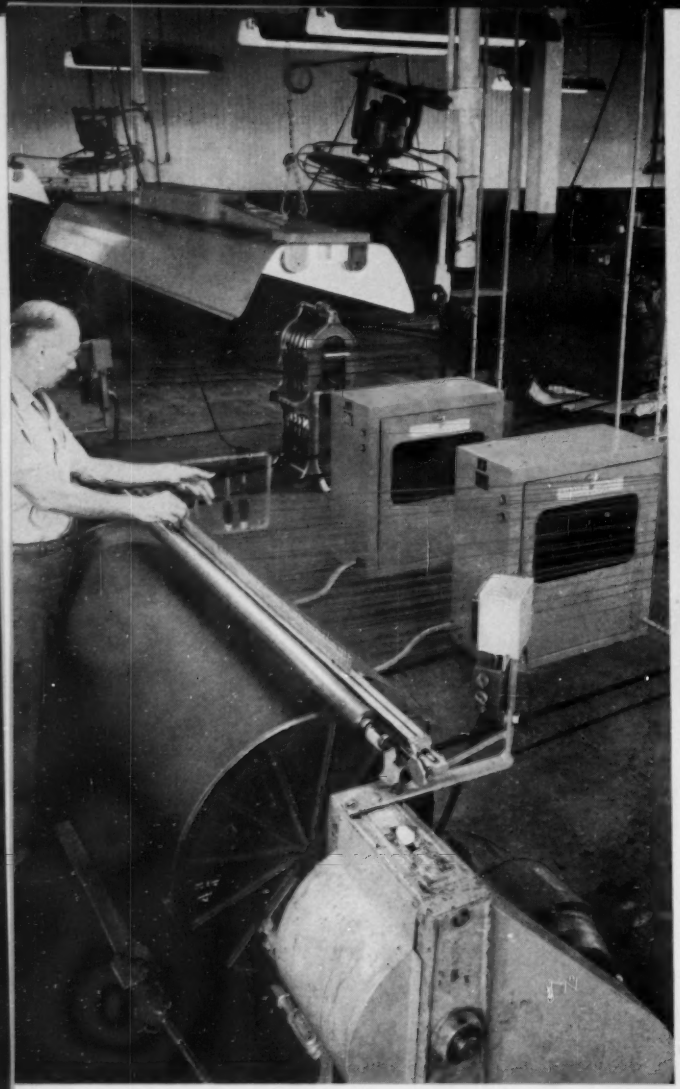
ENGINEERING
REPORTS:

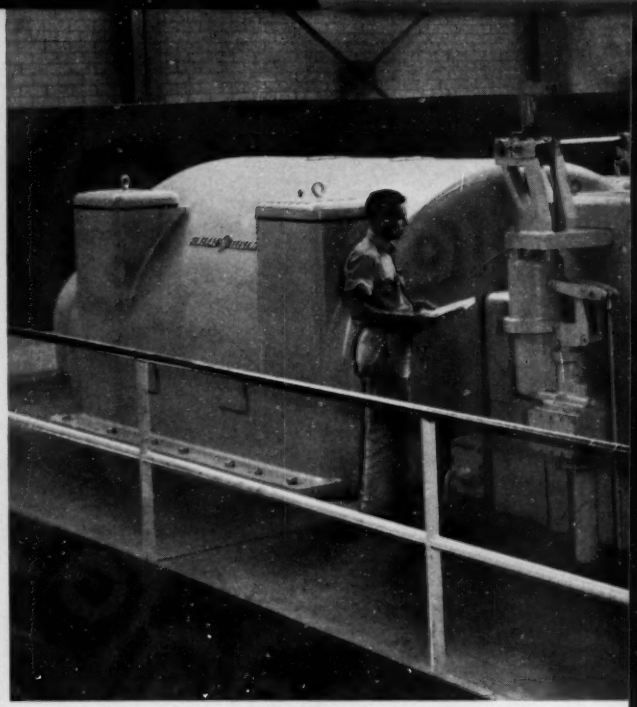
G-E engineering services simplify textile-mill modernization

General Electric engineering specialists will help you modernize your plant. These specialists make sure that you get not only the right electrical equipment but also a planned modernization program. They can speed your purchasing . . . plan deliveries . . . combine latest products and techniques into efficient electrical systems . . . even develop new equipment, if necessary, to meet your special problems. That's why G-E engineering help in electrical modernization is your best equipment investment protection.

TURN PAGE FOR MORE

GENERAL ELECTRIC

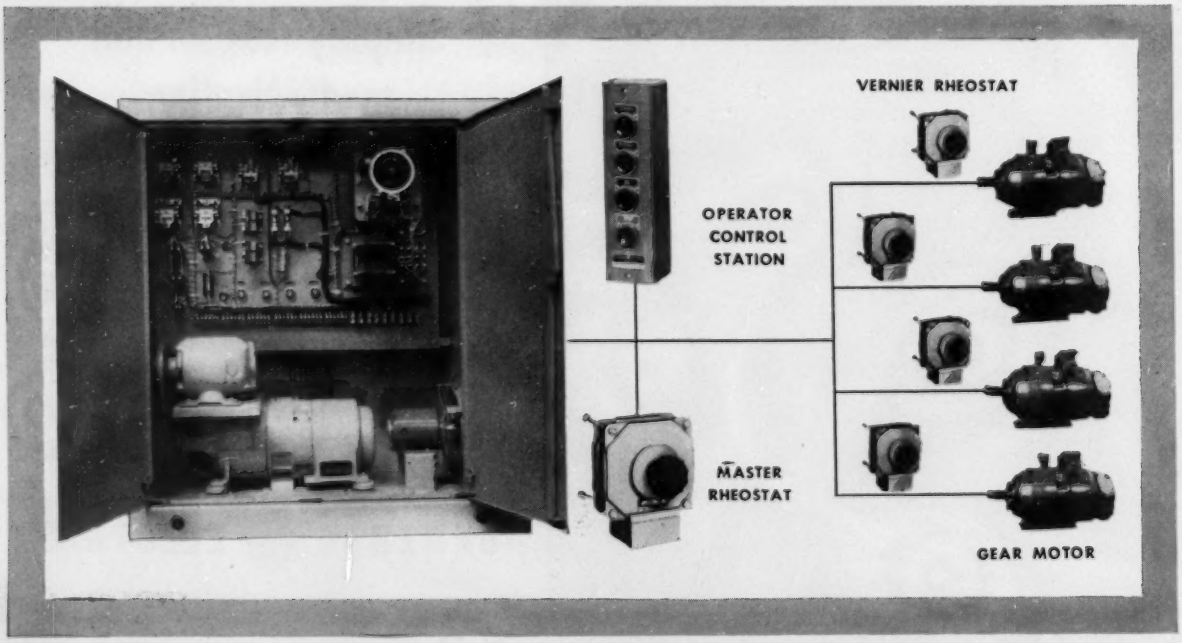




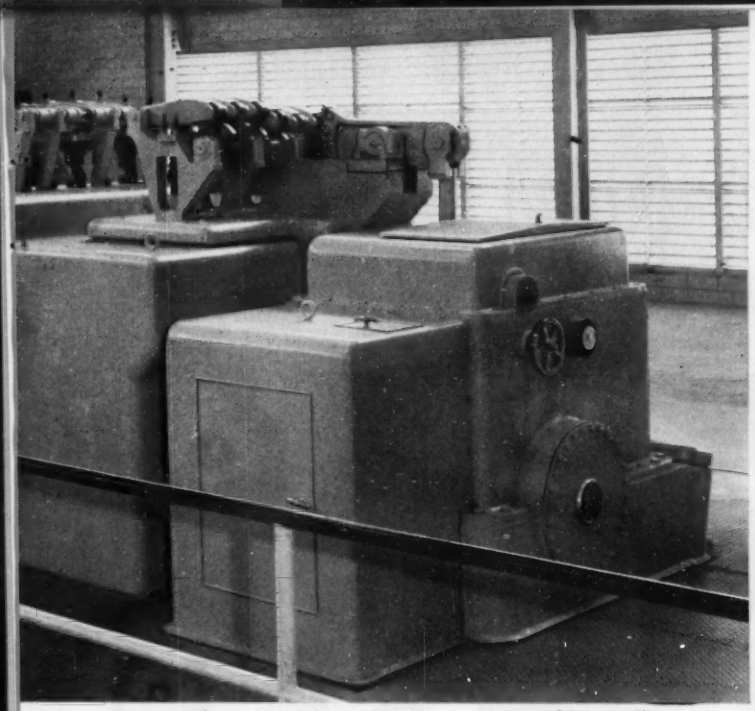
ECONOMICAL POWER GENERATION is possible with G-E steam turbine-generators. Steam becomes a by-product of

Flexibility of G-E helps textile mills

G-E SPEED VARIATOR provides integrated adjustable-speed drives from a-c power. Specialized forms drive finishing ranges, slashers, warpers, printing machines, etc.



SPEED VARIATOR power unit, operator's control station, rheostat, drive units can be installed almost anywhere to fit plant layout.



power and may be used for other process purposes. Many mills find it pays to use this economical prime mover.

drives and power systems increase production

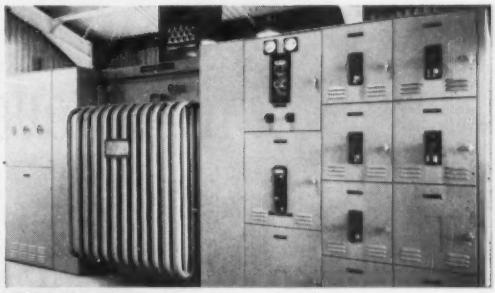
CHANGING MARKET CONDITIONS demand that textile mills produce a wider variety of fabrics faster and more efficiently. With General Electric's help, many mills are modernizing electrically to improve their quality control and to compete more effectively in today's market.

WHEN YOU MODERNIZE with G-E electrical equipment, you benefit many ways. For example, G-E power-system equipment is factory-assembled to cut installation time and cost. This equipment saves space, adapts readily into your existing systems and can be expanded easily and at low cost because of its "building-unit" design. And G-E drives are engineered to last longer, with less maintenance, in textile-mill service. These are important considerations in your plant modernization program.

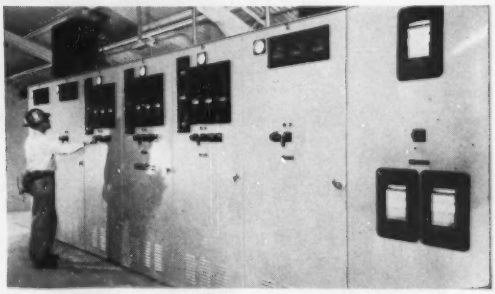
FOR ELECTRICAL HELP on your mill-modernization program, be sure to contact your G-E Apparatus Sales representative early in the planning stage. General Electric Company, Schenectady 5, N. Y. 654-36

Engineered Electrical Systems for Textile Mills

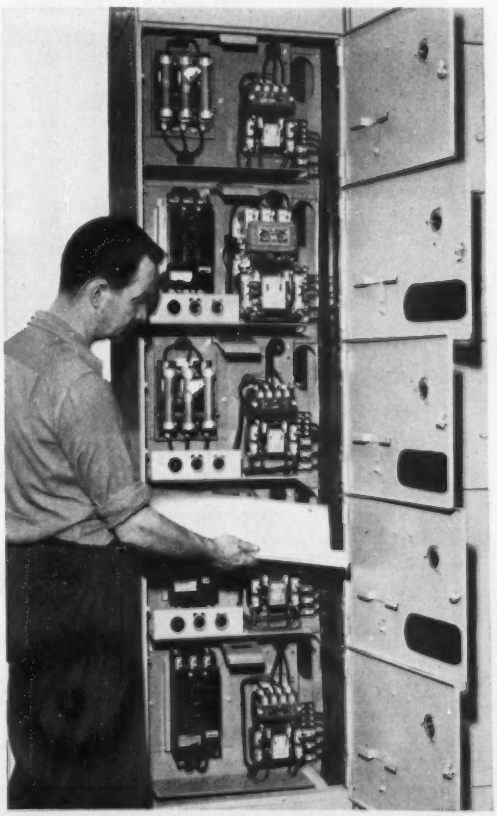
GENERAL ELECTRIC



EASILY INSTALLED G-E load-center unit substations bring power close to the load for economical distribution. Co-ordinated units with modern air circuit breakers give maximum reliability, feeder protection.

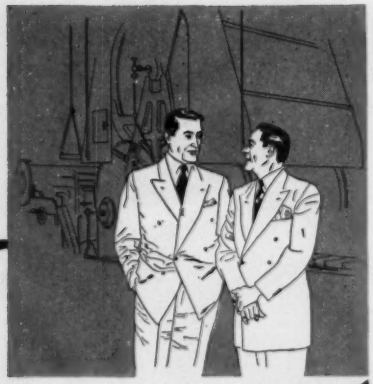


BETTER PROTECTION AND CONTROL of incoming lines and feeders, motors, generators, are provided with G-E metal-clad switchgear. Magne-blast air circuit breakers assure highly dependable operation.



PRE-ENGINEERED G-E motor control center is factory-wired and assembled, easy to install and service. Interchangeable units are versatile, mechanically strong.

the weaver's friend



A KEESTAR KEE PRODUCT

VICTOR Mill Starch

because it's always uniform
and backed by Keever service

Charles C. Switzer, Vice President
TEXTILE SALES DIVISION
1200 S. C. NATIONAL BANK BLDG.
GREENVILLE, SOUTH CAROLINA

THE KEEVER STARCH CO. ★ GENERAL OFFICES ★ COLUMBUS 15, OHIO
Processors of corn, wheat and blended starches for industry since 1898

(Continued from page 133)
ready maneuverability.

To oil the motor, we first drain out the old oil, and then flush with spindle oil. We then place wooden wedges under the motor on the idler wheel side, remove the idler wheels, and pump oil into the motor as previously described. After replacement of the idler wheels and removal of the wooden wedges, the cleaner is checked for broken, lost, or worn parts, and is then ready to put back into operation.

Four or five men now oil all our creels and ceiling cleaners in about eight hours, one-half the time it formerly required. In addition, the cost of oil has been reduced about 50 per cent by purchasing it in drums rather than in one-quart cans.

CONTRIBUTOR NO. 8796

HOW OTHER MEN MANAGE

How to Get 3 Picks Per Inch On XD Looms

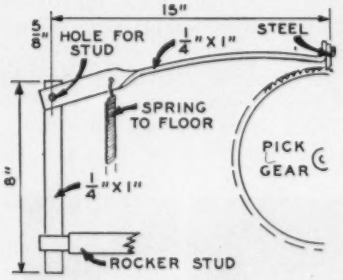
This item was submitted in a Kink Contest.

EDITOR TEXTILE INDUSTRIES:

We are running a very light scrim on XD Draper looms. One of our customers wanted this fabric with three picks per inch.

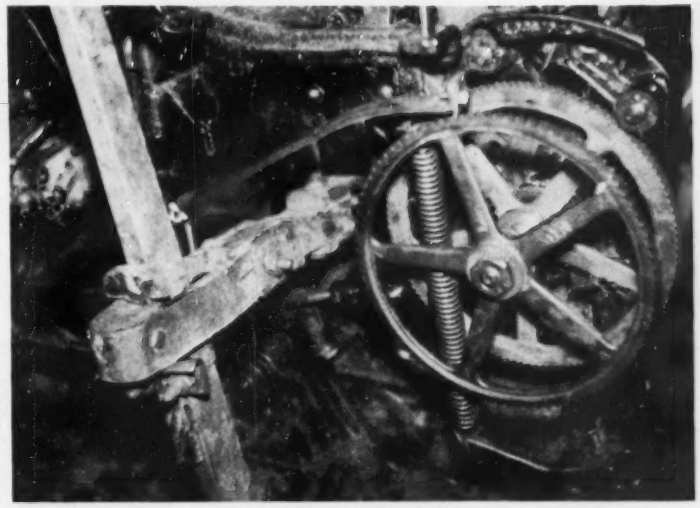
Our first step was to change the small pinion gear which runs on the end of the pick gear shaft. This gear contains 22 teeth; we put on a 24-tooth gear. This is the largest gear that can be used, because of the limited space available for adjustments. This brought us down almost to four picks.

We then took off the hand wheel and put a piece of ¾″ pipe, 1½″ long, in its place. On this we mounted a 100-tooth pick gear (the same number of teeth as the original pick gear).



Next we made an arm of flat steel 15″ long, ¼″ thick, and 1″ wide. This was bent at right angles 1″ from its end, a ¼″ hole bored in the 1″ section, and a take-up dog attached.

A ⅜″ hole was bored in the other end of the arm and an 8″ piece of the same stock attached to it. A hole was then bored in the other end of the 8″ arm, which was bolted to the end of the take-up arm which turns the pallet lever.



The final step was to hold the device in place with a spring attached to a screw eye in the floor.

With this take-up attachment the pick gear is kept continuously turning, and gives us three picks per inch in the fabric.

CONTRIBUTOR NO. 8768

"Standardize Shirley Analyzer Reports" Swedish Cotton Mills Ask

EDITOR TEXTILE INDUSTRIES:

The Shirley Analyzer, used to determine the cleanliness of cotton, separates the material into three fractions: lint (i.e., spinnable fibers), heavy trash, and cage loss (dust, etc.).

In most Shirley Analyzer investigations it is usual to report percentages of all the components, because the proportions between them are in many cases of interest. Sometimes, however, it is impracticable to give all the figures, and only one of these quantities is used. This is the case, for instance, when the cleanliness of the different bales in a shipment is compared. The calculation of all the percentages involves considerable work.

The question is, then, which is the best figure to give—lint, heavy trash, or cage loss?

The U. S. Department of Agriculture has in some cases used the nonlint content, other investigators use the proportion of lint, and still

others the proportion of heavy trash. It would be extremely desirable if greater uniformity could be obtained in this matter, and in some cases it is really necessary, for example in the merchandising of cotton.

My opinion is that the most suitable figure to give is the lint figure. One advantage is that the price per pound can be calculated directly from this percentage. It can also be used to estimate the output of sliver or yarn, and involves less work than the other figures.

To give only the nonlint content (heavy trash plus cage loss) is generally impracticable, and may also cause confusion as to whether one actually means nonlint content or only heavy trash.

It is entirely unsuitable to give only the heavy trash content, since this figure gives no information at all regarding the lint content of the sample, which after all is the most important figure affecting the commercial value of the cotton.

My conclusion, which is shared by the Swedish cotton mills, is that cotton is best characterized by its lint content, and we want to emphasize the need for reaching an agreement on this point between different agencies dealing with cotton. Since cotton is an item of international trade, such an agreement must be reached on an international level.

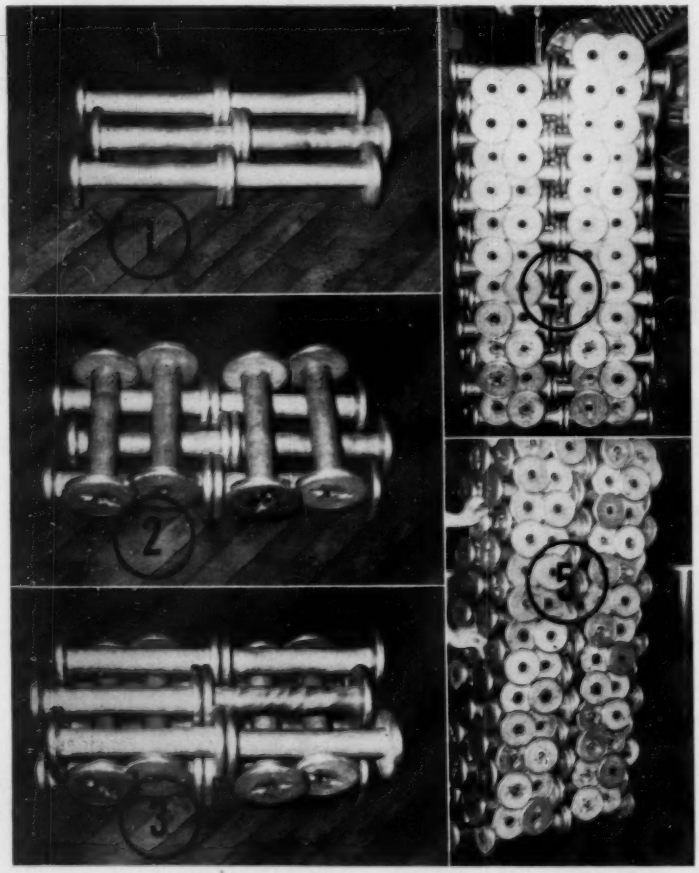
NILS-BERTIL FURVIK
Institute for Applied Textile Research
Gothenburg, Sweden

Write to the Editors!

Readers are invited to make use of this section for further discussion of published articles, or for discussion of problems arising in the plant. Names will not be used without permission. Payment is made for practical articles or for letters containing manufacturing information.

Address: Editor "Textile Industries," 806 Peachtree St., N. E., Atlanta, Ga.

Stacked This Way, Worsted Roving Bobbins Can Be Pushed Anywhere



WORSTED ROVING BOBBINS can be stacked to as many rows as desired by the method shown in photos 1 through 4, and will remain locked in position. The stack can be pushed wherever required, as shown in photo No. 5.

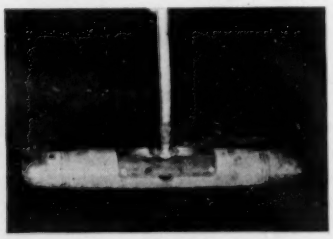
How to Make Floor Brushes Last Longer

EDITOR TEXTILE INDUSTRIES:

Wide floor brushes usually have a wooden handle which is threaded into the brush. The threaded part often wears out while the brush still has considerable service left in it.

Here's how to prolong the life of these brushes.

First, take a piece of 1½-in. angle iron about 10 in. long. To



this weld a length of 1-in. conduit pipe long enough to serve as a handle for the broom.

Next, square off the top of the brush to fit the angle iron, drill four holes in the iron as shown in the accompanying photo, and attach to the brush, and your floor brush problems are over.

CONTRIBUTOR NO. 8795

ABNEY MILLS • GOODALL SANFORD, INC. • ROANOKE MILLS CO. • SWIFT MFG. COM
J. P. STEVENS & COMPANY • U. S. RUBBER COMPANY • AVONDALE MILLS • CORRIHER
• FIRESTONE TEXTILES, INC. • P. H. HANES KNITTING COMPANY • SPRINGS COTTON MIL
ILLS • CANNON • BONHAM COTTON MILLS • BRU
TON YARN MILLS KENDALL MILLS • PEPPERELL MFG. C
ET CO. • MOHA MFG. COMPANY • JAMES LEES &
MILLS, INC. • ALEXANDER SMITH & SONS • PACIFIC MILLS • BATES MFG. COMPANY •
TEXTILES • CHATHAM MFG. COMPANY • ROCKFORD MFG. COMPANY • JOHNSTON M
• JANTZEN KNITTING MILLS ONT MILLS
ANY • BIBB MFG. COMPANY NY • ELK
A. & M. KARAGHEUSIAN, INC. NG MILLS, II
LINIAN MILLS • HARRIET COTTON MILLS • EASTERN MFG. COMPANY • SPINDALE MILLS
COMPANY • DIXIE MERCERIZING COMPANY • EQUINOX MILLS • DUNDEE MILLS, INC. •
BOWLING COATS & CLARK, INC. • LIN
AMERICAN DAN RIVER MILLS • W. J.
• COLLINS OWAN COTTON MILLS • MA
MILLS • LYDIA COTTON MILLS • JORDAN SPINNING COMPANY • PACOLET MFG. COMPA
ENTON COTTON MILLS • WOODSIDE MILLS • STEVENS MILLS • MANETTA MILLS • ROX
PALMETTO SPINNING CORP. • SPRAY MERCER YA
ANY • TALLASSEE MILLS • NATIONAL D COMPAN
STANDARD-COOSA-THATCHER CO. • J ENEY FABR
TILES • BACHMANN UXBRIDGE WORST • CARON
ARCADE COTTON MILLS • CHAMPLAIN COMPANY
BIGELOW-SANFORD CARPET COMPANY OOMS OF

Look to Pneumafil for the new

PNEUMAFIL®

Now...a New Development as

IVERSIDE MILLS • COLUMBIA
OAKDALE COTTON MILLS •
INFORD MILLS, INC. • START
NDUSTRIAL COTTON MILLS •
AMAZON COTTON MILLS • F
AMEROTRON CORPORATION •
MARTHA MILLS • JULLIETT
HANNAH PICKETT WORSTED M
VISCASSETT MILLS CO. • AR
DENFIELD MILLS, INC. • CA
GUERIN MILLS, INC. • CHEM
OMPANY • ROCKFISH-MEBA
CLINCHFIELD MFG. COMPA
ANY • NATIONAL YARN MI
SUPERIOR YARN MILLS • F
MILLS • SAMUEL HIRD & SO
OMPANY • GROVES THREAD
VELLINGTON MILLS • VERDU

1. New molded aluminum alloy housing—360° exhaust vent—rounded corner safety feature.

The new Pneumafil Economizer System

TODAY, 18 months ahead of schedule and fully tested, this new Pneumafil Economizer System is ready for your mill, giving you the most modern, best engineered material recovery system in the world.

On the new Pneumafil Economizer System, you will find these outstanding features:

Increased air volume for maximum removal of lint and fly—with less horsepower.

New Pneumafil Economizer System has 50% greater collection capacity with no loss in pressure efficiency.

The new light weight alum double access vacuum s baked-on enamel finish insi of machinery.

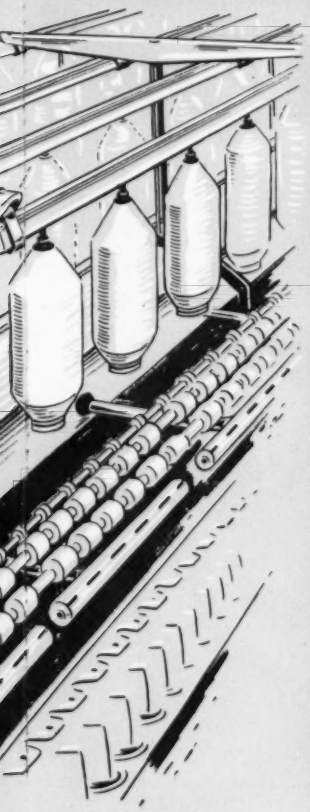
Newly designed machined a rotor blades is self-cleanin

Air is gently released in all cially designed vents... the

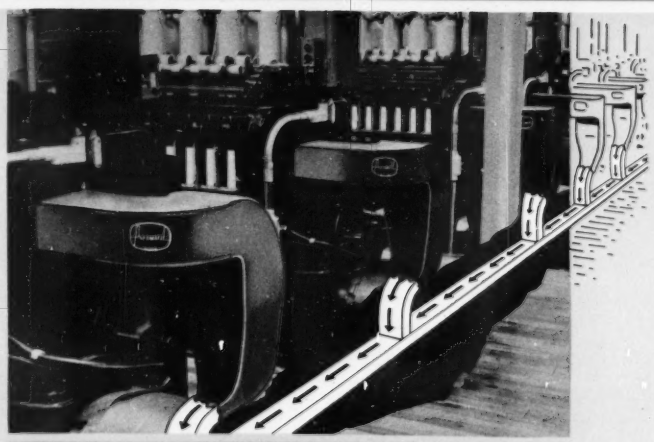
Completely versatile... inte Central Air Type — Centra matter of minutes.

Developing tomorrow spinning more and bette

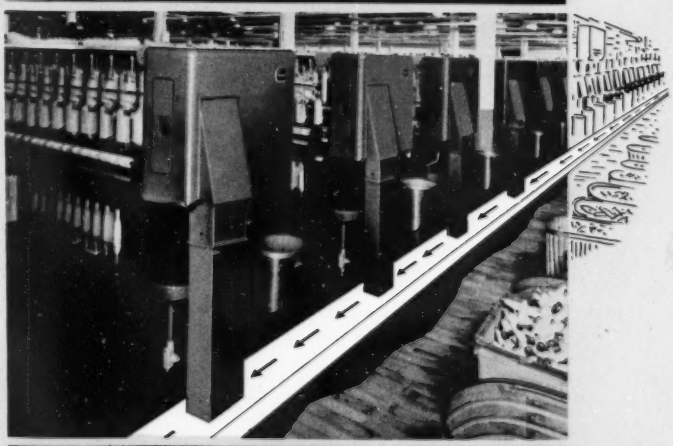
amazing as the original idea



Shown above is the new Pneumafil LINT-FREE CREEL



CENTRAL MATERIAL RECOVERY Material recovery from a group of frames—automatically conveyed to picker hopper, or to any point in mill—also with uniform distribution of conditioned air.



CENTRAL AIR HANDLING Individual frame material recovery—served by a centrally located motor and fan . . . provides uniform distribution of conditioned air and a reduction of room heat load.

uminum alloy housing with sealed doors—mirror like nside and out. A rugged piece

aluminum fan with involute ning.

ll directions through 224 spe- here are no disturbing drafts. terchangeable from Unit to ral Air to Unit Type—in a

w equipment today for arn for less.

PNEUMAFIL®

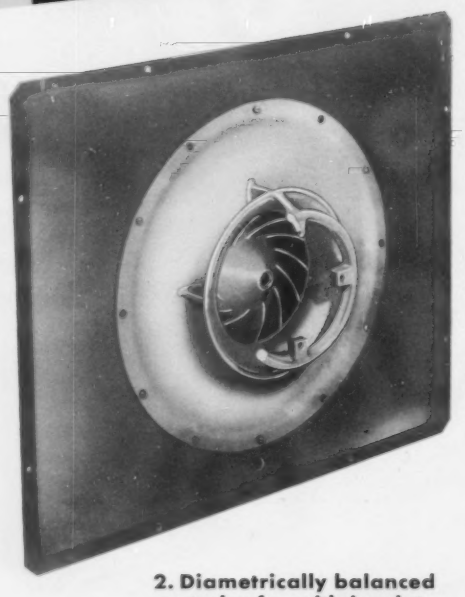
Look to Pneumafil for the new

ROCHAMBEAU
ND SPUN SILK
S • MERRIMAC
CORP. • ERW
COMPANY •
STANDARD K
ED COMPANY
EY CORPORATIC
S. WORSTED C
MILLS • FRENC
RP. • SELLERS
• NATIONAL
RS MFG. COMP
WALTON CO
TURING COMPA
MFG. COMPANY
ANY • ROXBU
OMPANY • W

NEW EQUIPMENT SECTION

Now...a New Development as

IVERSIDE MILLS • COLUMBIA
OAKDALE COTTON MILLS •
INFORD MILLS, INC. • START
NDUSTRIAL COTTON MILLS •
AMAZON COTTON MILLS • F
AMEROTRON CORP



2. Diametrically balanced turbo-fan with involute design rotor blades.

3. NEW mirror finished stream lined venturi.

The new Pneumafil Economizer System

TODAY, 18 months ahead of schedule and fully tested, this new Pneumafil Economizer System is ready for your mill, giving you the most modern, best engineered material recovery system in the world.

On the new Pneumafil Economizer System, you will find these outstanding features:

Increased air volume for maximum removal of lint and fly—with less horsepower.

New Pneumafil Economizer System has 50% greater collection capacity with no loss in pressure efficiency.

The new light weight alu double access vacuum baked-on enamel finish in of machinery.

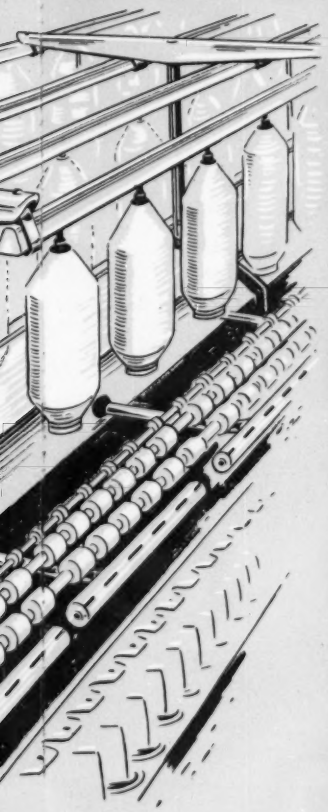
Newly designed machined rotor blades is self-cleani

Air is gently released in all cially designed vents... th

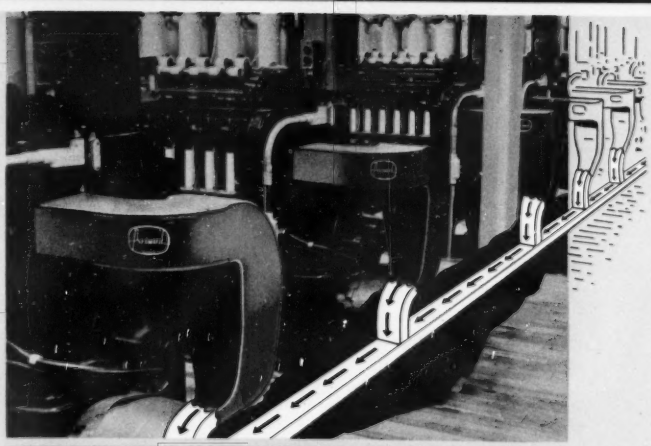
Completely versatile... int Central Air Type—Centr matter of minutes.

Developing tomorrow spinning more and bette

s amazing as the original idea



Shown above is the new Pneumafil **LINT-FREE CREEL**



CENTRAL MATERIAL RECOVERY Material recovery from a group of frames—automatically conveyed to picker hopper, or to any point in mill—also with uniform distribution of conditioned air.

CENTRAL AIR HANDLING Individual frame material recovery—served by a centrally located motor and fan . . . provides uniform distribution of conditioned air and a reduction of room heat load.

aluminum alloy housing with
n sealed doors—mirror like
inside and out. A rugged piece

ed aluminum fan with involute
aning.
all directions through 224 spe-
. there are no disturbing drafts.
interchangeable from Unit to
ntral Air to Unit Type—in a

rowth equipment today for
tter yarn for less.

PNEUMAFIL®

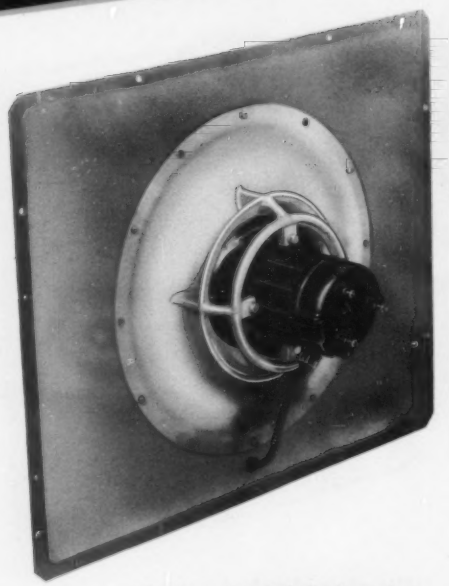
Look to Pneumafil for the new

ROCHAMBEAU
ND SPUN SILK
S • MERRIMAC
CORP. • ERW
COMPANY •
STANDARD K
ED COMPANY
EY CORPORATIC
S. WORSTED C
MILLS • FRENC
RP. • SELLERS
• NATIONAL
RS MFG. COMP
WALTON CO
TURING COMPA
MFG. COMPANY
ANY • ROXBU
OMPANY • W

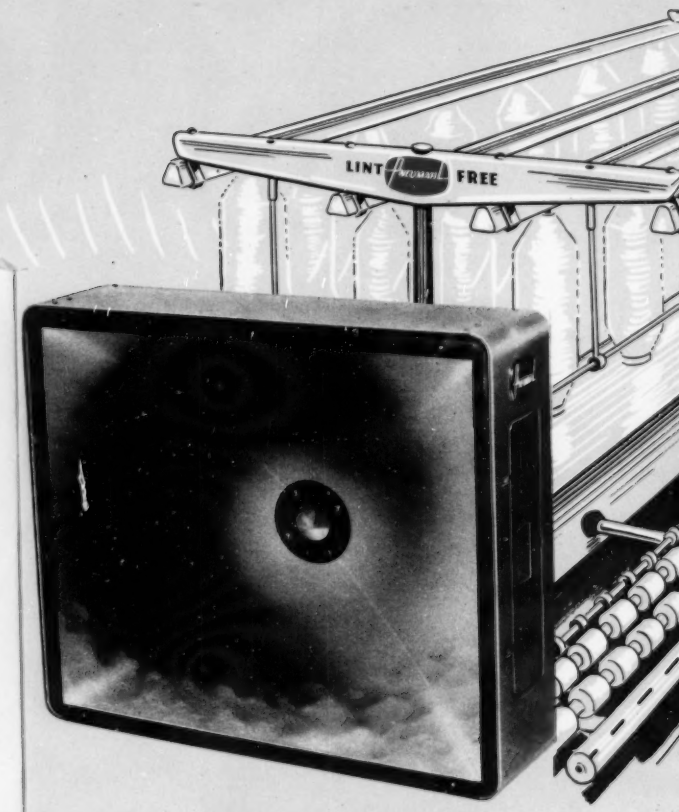
NEW EQUIPMENT SECTION

Now...a New Development as

RIVERSIDE MILLS • COLUMBIA
OAKDALE COTTON MILLS
INFORD MILLS, INC. • START
INDUSTRIAL COTTON MILLS
AMAZON COTTON MILLS • F
AMEROTRON CORP



4. New special design air-cooled venturi mounted motor.



5. New increased capacity material recovery unit with fine mesh screen.

The new Pneumafil Economizer System

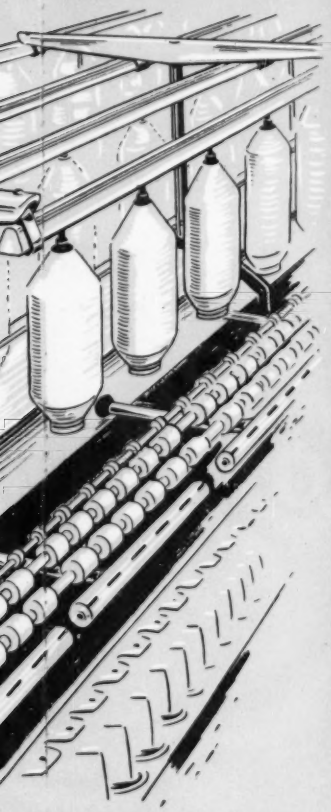
TODAY, 18 months ahead of schedule and fully tested, this new Pneumafil Economizer System is ready for your mill, giving you the most modern, best engineered material recovery system in the world.

On the new Pneumafil Economizer System, you will find these outstanding features:

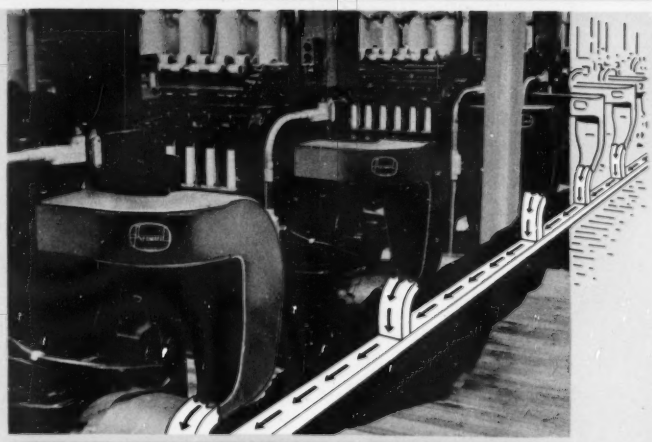
- Increased air volume for maximum removal of lint and fly—with less horsepower.
- New Pneumafil Economizer System has 50% greater collection capacity with no loss in pressure efficiency.
- The new light weight a... double access vacuum... baked-on enamel finish... of machinery.
- Newly designed machined... rotor blades is self-clea...
- Air is gently released in c... cially designed vents...
- Completely versatile... i... Central Air Type — Cen... matter of minutes.

Developing tomorro... spinning more and bet...

s amazing as the original idea



Shown above is the new Pneumafil LINT-FREE CREEL



CENTRAL MATERIAL RECOVERY Material recovery from a group of frames—automatically conveyed to picker hopper, or to any point in mill—also with uniform distribution of conditioned air.

CENTRAL AIR HANDLING Individual frame material recovery served by a centrally located motor and fan . . . provides uniform distribution of conditioned air and a reduction of room heat load.

aluminum alloy housing with
m sealed doors — mirror like
n inside and out. A rugged piece

ed aluminum fan with involute
aning.
all directions through 224 spe-
. . there are no disturbing drafts.
interchangeable from Unit to
entral Air to Unit Type — in a

row's equipment today for
etter yarn for less.

PNEUMAFIL®

Look to Pneumafil for the new

ROCHAMBEAU
ND SPUN SILK
S • MERRIMAC
CORP. • ERW
. COMPANY •
STANDARD K
ED COMPANY
EY CORPORATIC
S. WORSTED C
MILLS • FRENC
RP. • SELLERS
• NATIONAL
RS MFG. COMP
• WALTON CO
TURING COMPA
MFG. COMPANY
ANY • ROXBU
OMPANY • W

NEW EQUIPMENT SECTION

GON WORSTED CO. • ROYAL COTTON MILL CO. • BURLINGTON INDUSTRIES • NAT
AKER MEADOWS MILLS • INMAN MILLS • WARWICK MILLS • MILLEDGEVILLE MILLS
Y • SUMMERVILLE MFG. CO. • WAVERLY MILLS • AMES TEXTILE CORPORATION • F
ANGER MILLS • CLINTON •
GREENVILLE M ARKDALE MILLS •
ERDALE MILLS MFG. CO. • DA
Y • PEPERT • HIGHLAND C
LYMANSVILL S, INC. • CLEVE
RGETIC WOR VOOLEN MFG. C
P. • PREMI STON WORSTED
MILLS COMP • STOWE THRE
ON MILLS • IE TEXTILES • IC
YERSBURG C C. • ACME SPIN
LAIDE MILLS, MILLS • TROY •
PLON SPINNI STON MILLS • W
ECTION SPIN ILLS • ROXBOR
PRINGFIELD V ICE MFG. COMPA
ES • BLANC MFG. COMPANY
RVIEW MILLS MFG. COMPANY

Your Surety Bond...

We are dedicated with singleness of purpose to the development, manufacture, and application of engineered products of tomorrow for your use today. The full strength of our resources shall be employed in this endeavor:

- To provide products and services of unsurpassed quality.
- To develop new and better products through ceaseless modern research.
- To operate with maximum efficiency, thus attaining the lowest possible prices.
- To place at your disposal experienced and technical experts for assisting in the selection and use of the types of equipment best suited to your individual needs.
- To keep completely abreast of all patents pertaining to our field —protecting you against possible infringements.
- To maintain the most experienced and competent engineering and servicing organization in our field.

You can be sure . . . when you choose Pneumafil you are getting the BEST VALUE your money can buy.

C. R. HARRIS, *President*

You will want the complete story of the new Pneumafil Economizer System to see how it fits in your mill planning—There is no obligation—just send your name and address to:

PNEUMAFIL®

PNEUMAFIL CORPORATION

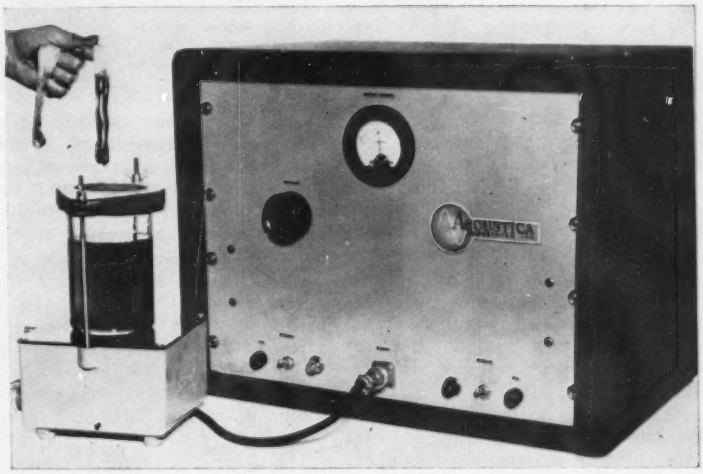
Charlotte 8, North Carolina

NEW Equipment AND MATERIALS

Ultrasonic Vibrator for Research and Application in Wet Processing

Utilizing highly efficient low frequency ultrasonic vibrations, the new Model DR-400 Ultrasonic Generating Equipment is ideally suited for ultrasonic dyeing and wet-finishing investigation of chemicals or fibers.

Recent work in cellulose, rayon, and other synthetic fibers has indicated far better dyeing results, particularly with such difficult-to-dye materials as Orlon. The time required to achieve level and complete dye penetration and dye bath exhaustion at less than boil temperature was reduced in some cases to 1/6th that of high-temperature dyeing. The new ultrasonic device might point the way to savings in capital equipment, labor, steam, and chemicals while raising production levels.



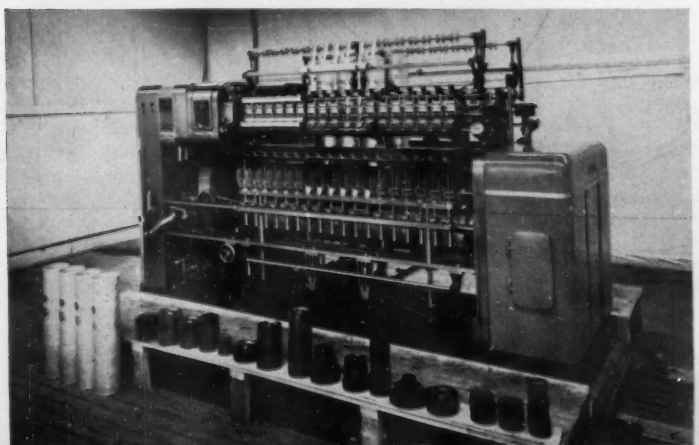
In operation, swatches or skeins are lowered into a dye-filled jar of the DR-400. The jar is secured to a rugged magnetostriction-type transducer developing intense vibrations at a frequency just beyond hearing range. These vibrations create copious cavitation in the liquid. Millions of vapor bubbles are created and collapsed continuously. The terrific pressures released by the collapse of the cavitation bubbles, which are equal to thousands of Gs, break up agglomerates in liquid vehicles and produce very fine, uniform dispersions. Dye is shot into the fabrics with tremendous force without any mechanical effect on the fiber, yarn, or cloth construction.

Groups of these transducers can be placed in existing dye jigs for production use and can be energized from economical motor-generator sets. Applications in the textile field include rinsing, scouring, bleaching, sulfuric acid carbonizing, fulling, resin impregnation, mercerizing, and other wet-finishing operations.

Acoustica Associates, Inc., 421 Seventh Ave., New York 1, N. Y.

More Data? Write ◂ or use card, p. 163; list F-101

Machine Spins Stronger and Evener Cotton Yarns Directly from Drawing Sliver

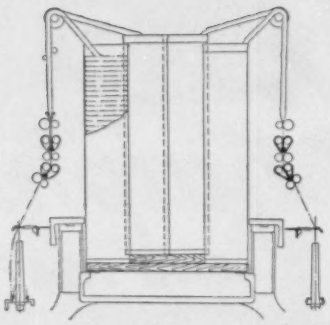


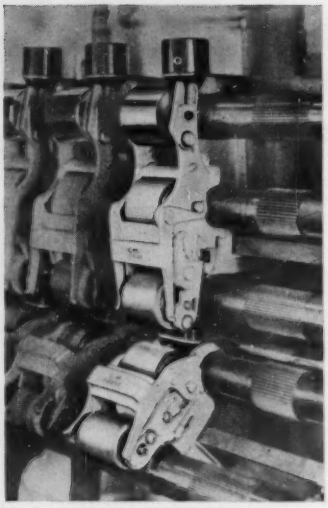
Now available through an agent in the United States is a Japanese-made cotton spinning frame which spins yarn directly from drawing sliver, eliminating entirely the roving frame process.

Called the O. M. Super High Draft Spinning System, it is manufactured by O. M. Spinning Machine Co. of Osaka, Japan, officials of which report that over 500,000 spindles have already been built.

Yarns spun on the first machine shipped to the United States (a 36-

spindle sample frame installed at the New Bedford Institute of Textiles and Technology, New Bedford, Mass.) range from 20s to 108s spun from combed drawing sliver, and 30s to 40s from carded drawing sliver. Comparison of test results of the various sample frame combed yarns with the corresponding yarns made from the same stock processed on conventional equipment showed that in almost every case the break factors, evenness, and yarn appearance were equal or better than the yarns spun on the conventional equipment. Also, much higher spindle speeds and front roll speeds were attained.





How drawing sliver is converted into yarn on the OM-S spinning frame. Sliver is drawn from cans in creel (see cross-section sketch above), through drafting sections, and onto spindles on both sides of frame. Sketch and close-up photo of the five-roll, twin-apron drafting system are reproduced at right. Photo of sample frame on p. 145.

A comparison of the labor and overhead costs in a New England combed yarn mill, opening through spinning, for 19.5s and 80s counts spun on conventional high draft equipment and on this Japanese OM-S frame indicates that for both counts the direct spinner provides a saving in labor and overhead of 24%.

The drafting element, considered the most important feature of this new spinning system, consists of a five-roll, twin-apron, drafting system. The first three rolls correspond to the drafting elements of a Casablanca roving frame, whose draw boxes are in a vertical position with the middle rolls driving aprons. Drafts up to about 20 are realized in this section. The front two rolls (in conjunction with the front roll of the roving section) correspond to the elements of a Casablanca spinning frame. Drafts up to 30 are realized in this section. This gives a total draft of about 600, although drafts up to 700 have been successfully attained.

As for the sliver, a frame of 3" gauge normally uses a can 5⅜" in diameter and 24" high. It holds approximately 1½ lb of sliver; thus, a can of sliver would normally last about one week for medium yarn counts and almost two weeks for fine counts at normal three-shift operation.

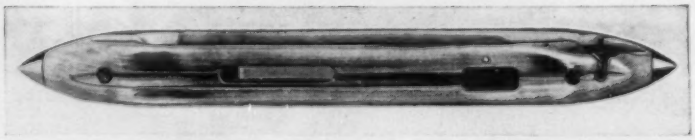
The sliver is normally prepared on a finisher drawing frame built, or converted, to handle these special small cans. O. M. builds a draw frame for this purpose which contains four cans on a turret in place of one normal large can. As soon as one can is full, the turret automatically revolves 90° and starts filling the next can, while a knife actually cuts the sliver. The three full cans at each delivery are then doffed while the fourth can is still filling, without losing production for doffing. Each can contains the same yardage, permitting spinning frames to be "gang creeled."

Some of the other features of this system are: pneumatic clearers, roller bearing spindles, spring pressure on rolls, vertically adjustable pig tails for each spindle, horizontally adjustable lappets, controlled ballooning, simple pressure removal, lappet tilting mechanism, complete control of all fibers during drafting allows proportion of shorter stock to be blended in, extremely fine control of drafts through 3,000 possible combinations, spindle speeds up to 12,300 rpm obtainable, knee brake on each spindle, no overframe cleaning required.

Edward S. Rudnick, 585 Allen St., New Bedford, Mass.

More Data? Write ◄ or use card, p. 163; list F-102

New Long-Life Shuttle ⟶



Because of the special treatment given to the natural dogwood from which it is made, the newly developed Wood-N-Dure shuttle has exceptionally long life.

Fewer of these shuttles break before they wear out since the close-grained material better withstands the stresses, shocks, and blows which cause failure through fractures at the side eye, the front walls, around the thread cutter and feeler slots, etc.

The "hardened" wearing surfaces afford greatly increased resistance to wear and abrasion of the loom. When this shuttle does begin to wear, it wears very smoothly and evenly, polishing to a high gloss and reducing the necessity of sanding for squareness and smooth finish. The harder surface resists splintering of the edges.

The hardness and finish of this denser material eliminates the necessity for any fiber-cladding, no matter how fine or delicate the filling or warp being woven. Also, the new shuttle is more impervious to atmospheric changes, reducing swelling, deformation, etc. It weighs from two to four ounces more than conventional shuttles.

The Wood-N-Dure process confines treatment to those areas where failure and wear are most likely to occur, leaving the center section rela-

tively soft to afford maximum holding power around the tip. Although the natural wood is strengthened and hardened, there is no adverse effect on its resiliency.

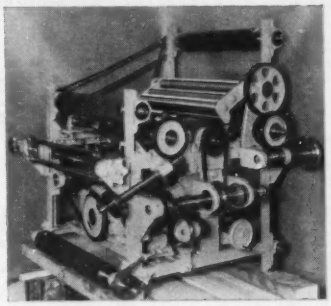
U. S. Bobbin & Shuttle Co., Lawrence, Mass.

More Data? Write ◄ or use card, p. 163; list F-103

Lab Type Roller Coating Machine Saves Compound and Fabric

With a laboratory size universal roller coating machine now available the best method of applying various qualities of latex and other compounds to the many different types of fabrics can be solved in the laboratory on small pieces of fabric, rather than experimenting with large batches of compounds and cloth in the mill.

The machine is in almost every detail a scale model of one of the standard Mawaco coating machines, so that the exact working conditions encountered in the mill may be duplicated.



Mawaco Machine Co., Inc., 56 Bogart St., Brooklyn 6, N. Y.

More Data? Write ◄ or use card, p. 163; list F-104

Deep-Dye Nylon Offers Many Practical Advantages

A new kind of nylon, which makes possible the dyeing of 100 per cent nylon fabrics two colors in a single bath, or nylon mixtures with other fibers three or more colors in a single dye bath, has been developed. Production of filament, staple, and tow is planned.

Called "deep-dye" nylon, it is distinguished by unusual whiteness, a great affinity for all classes of dyestuffs (it even has a good affinity for direct dyes which usually leave nylon white), and a capability of being dyed to uniform level shades.

Practical advantages for the mill man include:

1. Static problems reduced due to greater moisture absorption;

2. Finer yarn counts are possible because of the staple's uniformity and strength;

3. Improved packaging techniques plus a low net-boil shrinkage effectively minimize problems due to warp streakiness and barre conditions;

4. Heat sets at low temperatures—shorter conditioning cycles, reduced lag periods, smaller inventories, and less heat damage;

5. More uniform fabrics from looms and knitting machines since its controlled shrinkage will probably minimize distortions to a considerable degree.

6. Excellent abrasion resistance.

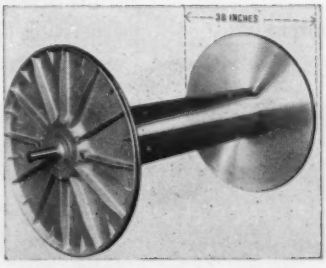
National Aniline Division, Fiber Sales and Service, Allied Chemical & Dye Corp., 261 Madison Ave., New York 16, N. Y.

More Data? Write ◄ or use card, p. 163; list F-105

Giant Beam Helps Mills Meet Competition

A new, giant 38" x 54½" aluminum section beam for cotton and spuns will do the work of two 28" beams, weighs 207 pounds for easy handling, saves warping time and slasher time, yet holds 1050 pounds of yarn.

Carefully balanced, this beam will run up to 1000 yards per minute with minimum vibration, so that its true-running makes better warps possible. Its smooth aluminum construction eliminates splintering and prevents distortion from atmospheric changes.



The new beam also fits all current types of warpers, its simple assembly lowers maintenance costs, and it comes knocked-down to reduce storage space and shipping costs.

Hayes Industries, Inc., Jackson, Mich.

More Data? Write ◄ or use card, p. 163; list F-106

For High Speed Wetting

A series of three high-speed wetting and re-wetting agents, including one with non-foaming characteristics, has been announced.

Composed of solutions of sodium dioctyl sulfosuccinate, Dexolene G, B, and MTV (non-foaming) are especially effective as wetting out assistants and dye levellers in package and skein dyeing of cottons, rayons, and synthetics; assistants in finishing baths to promote thorough penetration of finish; penetrants and dispersing agents for vat dyes in pigment padding; re-wetting agents for goods which are to be pre-shrunk or which are to be padded after drying.

In exceptionally high-speed processing, Dexolene MTV prevents the build up of foam and is therefore recommended in place of Dexolene G and B for this type of work.

Only very small percentages are needed.

Dexter Chemical Corp., New York 59, N. Y.

More Data? Write ◄ or use card, p. 163; list F-107

New Builder for Filament Twisters

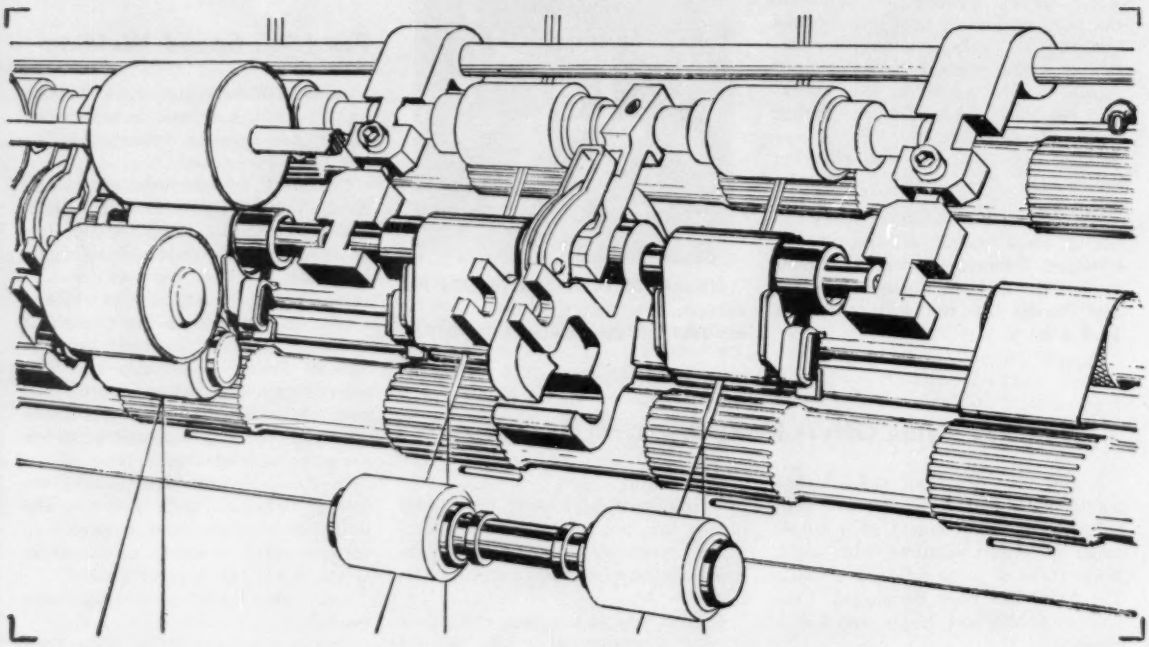
For mills desiring a more rugged assembly for twisting filament yarns and for building a bobbin that will not slough off during subsequent processing, an improved builder assembly designated the Model F-2 is available which produces a multicycle wind or filling wind on Saco-Lowell twisters running at high rail speed.

The builder can be used on Model 39, 42, and 42L twisters and is applicable to twisters equipped with Model C, R, G, S or SA builder motions if the mill wishes to convert to multicycle combination or filling wind only.

For applications where no knots are allowed in the yarns and progressive doffing is practiced, the F-2

WEIGHTING AND ACCESSIBILITY INCREASED WITH NEW DRAFT UNIT

Front Line Nebs are Eliminated



Grease-Sealed, Anti-Friction Top Rolls Eliminate Roll Cleaning and Re-Lubrication

Cradles are eliminated. The unit features an aluminum adapter bracket which provides for positive alignment of the front line roll, as well as a stainless steel nose bar with abbreviated apron guides. No contact between apron guides and rolls. Alignment and spacing are far more accurate, and heavier weighting is recommended. Present saddles may be retained. Completely accessible, and adaptable to any type of frame.

Write for complete information

5-Year Warranty

Any Precision Roll that becomes inoperative from loss of lubricant, entry of lint, choking, defects in material or workmanship, or any cause whatsoever will be replaced with a new roll (less cots) at one-sixtieth of the price for each month the discarded roll was in service.

The authorized weight capacity of all Precision Rolls is 150 lbs. Accelerated tests indicate that the life of the roll without cleaning, relubrication or servicing of any kind is more than 15 years.

COLE ENGINEERING CORPORATION

FOURTH AVENUE AT THIRTY-SECOND STREET

COLUMBUS, GEORGIA

builder assembly is highly recommended.

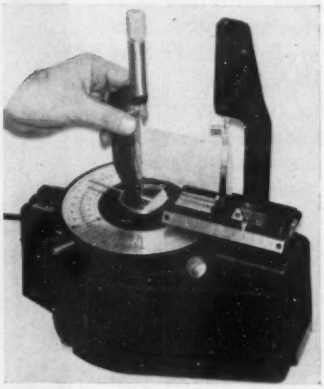
Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

More Data? Write or use card, p. 163; list F-108

Universal Stiffness Tester

A Universal Stiffness Tester, applicable to dissimilar materials and varying thicknesses, has been developed to measure stiffness and related properties of such materials as coated fabrics, leathers, plastic sheets and films, paper, etc. It fills the need for a generally applicable stiffness tester capable of measuring not only the stiffness of materials themselves but also the effects of coatings, treatments, and dimensional differences in stiffness and related properties.

The easy interchange of torsion units is adjustable to different sample sizes and a wide range of stiffness values. Another advantage lies in its adaptability of data which are recorded in gram-centimeter rather than relative units, thus enabling comparisons between test methods or between materials. The self-checking features of this motor-driven tester, coupled with excellent reproducibility, make it useful for research as well as routine production or quality control purposes.



United States Testing Co., Inc., 1415 Park Ave., Hoboken, N. J.

More Data? Write or use card, p. 163; list F-109

Seamer Fittings for Stretch Nylon Hosiery

Replacement fittings for Singer 242-2 hosiery seaming machines are now available to reduce stretch nylon seaming problems. Seams equal in appearance and quality to the best in hosiery of conventional construction are produced. Also, these seams have a degree of stretch comparable to the built-in stretch of the stockings themselves.

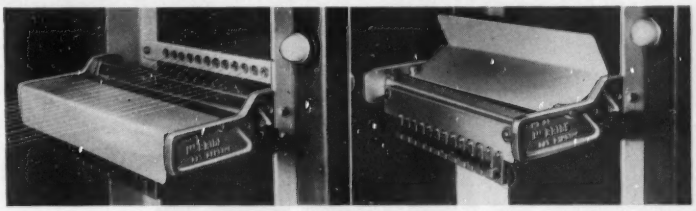
The six parts comprising the set of fittings can be ordered by part number. They are: Fabric guide (144575); needle guide (144577); chaining finger (Serial 199498); thread ratio control, complete (Serial 199535); puller feed roller bracket and chain cutter knife holder (144586); and needle thread guide (144530).

Machines should also be fitted with a steel rear feed disc and a rubber covered front disc.

Singer Sewing Machine Co., Manufacturing Trade Dept., 149 Broadway, New York 6, N. Y.

More Data? Write or use card, p. 163; list F-110

Warper Creel Stop Motion Permits Instant Cast-Out of Individual Ends



The flick of a switch is all it takes to cast out individual ends when the McBride Instant Stop with Selective Control is utilized on warper creels. Inactive ends are promptly reactivated because the yarn stays right in the drop wire.

Tying up of drop wires for inactive ends is eliminated, and wear and tear on the drop wire mechanism is greatly reduced as there is no unnecessary handling of drop wires.

In the left photo above, the stop motion is operating with four individual ends cast out. Signal light is out. Note that yarn is still threaded through all drop wires. Right photo, master red switch on right is in off position, cutting out entire bank of stop motions. Although not shown, yarn may remain threaded. Here it is removed to allow a clear view.

Edward J. McBride Co., Cottman Ave. & Wissinoming St., Philadelphia 35, Pa.

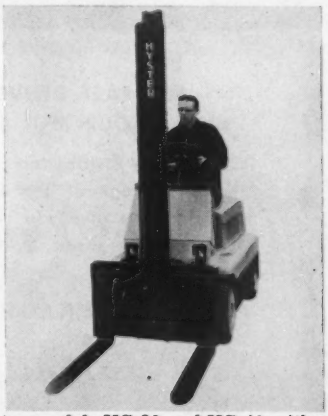
More Data? Write or use card, p. 163; list F-111

Panoramic Visibility Provided on Fork Trucks with One Mast

A new development in fork lift truck design is the Hyster "Monomast" which differs from conventional upright assemblies in that it consists of two box type sections, one telescoping within the other, resulting in a single mast. Thus, operators of trucks so equipped have a clear, unobstructed view to both forks and load, permitting faster operating speed and reducing driver fatigue.

Additional operating advantages offered are faster maneuverability, faster approach, more accurate load placing, and safer load handling.

All standard hydraulic attachments can be mounted on the Monomast attachment carriage; non-hydraulic attachments are also available. The Monomast mounting is conventional and can be field-installed on current three- and four-thousand-pound Hyster models UC-30 and YC-40 without alteration.



Hyster Co., Portland, Ore.

More Data? Write or use card, p. 163; list F-112

SWIFT'S SOAPS

treat fine woolens right!

For fifty years, Swift's soaps have been giving excellent performance when confronted with normal or even unusual fulling and scouring requirements.

Where long fulling cycles are required to obtain the dense, felted finish . . . the soft hand . . . and long wearing qualities that spell superiority, Swift's soaps can spell performance and economy into the same operation by giving excellent sudsing with maximum mileage.

There's a Swift soap for the textile finishing job regardless of temperature; or for use wherever fine dyeing calls for complete, yet gentle scouring. There's one for *your* particular set of requirements . . . one to give sure, skilled and experienced service — where fine woolens need the *right* treatment.

Write for details today, and remember...

ONE TRIAL IS BETTER THAN A THOUSAND CLAIMS

FOR FAST DELIVERY AND RESOURCEFUL SERVICE

375 Swift's distribution points located throughout the U.S. and Canada can give you immediate delivery on these Swift-quality soap products:

VERTEX FLAKES

●

557 FLAKES

●

WHITE RIBBON FLAKES

●

WOOL FLAKES

SWIFT & COMPANY

SOAP DEPARTMENT

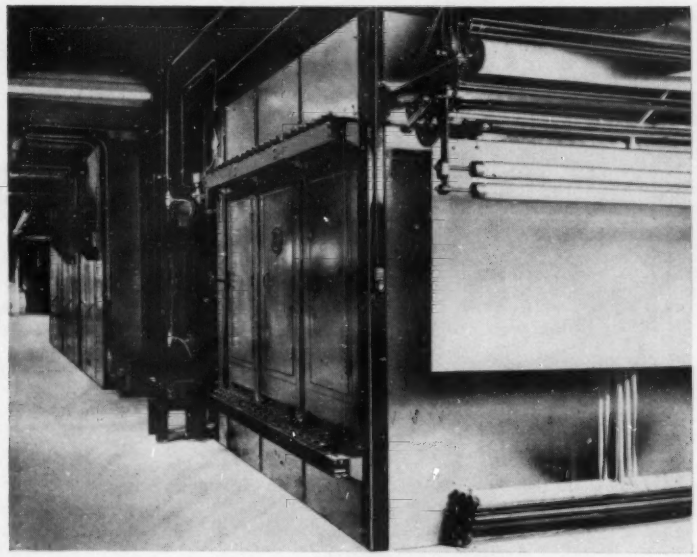
4115 PACKERS AVENUE • CHICAGO 9, ILLINOIS

Swift

1855 CENTENNIAL 1955

TO SERVE YOUR INDUSTRY BETTER

Curing Oven May Be Used As Dryer



Mills are finding that they can boost production and reduce costs by using the Hunter curing oven as a dryer. Recent reports show that a 3-section Hunter Curing Oven-Dryer, holding 69 yards of 40" fabric, removes from 720 to 900 pounds of water per hour from synthetic, cotton, wool, and blended fabrics.

Controlled, uniform air circulation, the same principle which makes this modern, gas-fired unit an efficient curing oven, also makes it highly effective when functioning as a dryer. The reason for this is a unique placement of nozzles which makes possible uniform temperatures throughout the entire length and width of the oven.

In drying operations, this means fabrics can be dried far more evenly —not only across their width, but also on both sides. In curing operations, controlled, uniform air circulation results in far more even polymerization of resins, because both sides of the fabric are heated evenly so that the inside of the fabric comes up to polymerization temperature more quickly.

The curing oven-dryer includes these special features: Sectionalized construction to allow for expansion, fabric tension reduced to absolute minimum, insulated "No-Through" metal paneling that holds heat more effectively, simplified maintenance with large doors that permit quick and easy threading and cleaning.

James Hunter Machine Company, North Adams, Mass.

More Data? Write ◂ or use card, p. 163; list F-113

Static Eliminator for Creels and Warpers

A compact, highly effective Chapman Static Eliminator for creels and warpers was introduced recently.

Called the Model LV-CW, this electronic static control unit consists of 1" diameter inductor bars and the Chapman LV power units. Inductor bars are placed across each stop motion eyeboard at the creel and at four locations on the warper.

Its operation is based on a very simple electronic principle: a high voltage induction on the inductor bars provides a constant field of ionized air from which the yarn ends may pick the required amount of either positive or negative charge to neutralize themselves.

The use of the equipment prevents ballooning of ends, broken ends due to looping or sticking, and a dirty warp due to attraction of lint and dust.

Designed for simple and quick attachment to the creel and warper, the static eliminator may be installed by any mechanic or electrician in a very short time.

An additional feature of this equipment is a special hinged attachment for the two inductor bars over the warper, allowing these bars to be lifted out of the way for easy access to ends.

The Portland Co., 22 Fore St., Portland 6, Me.

More Data? Write ◂ or use card, p. 163; list F-114

Gas-Fast, Sun-Fast Dyes for Acetate

A new series of gas-fast and sun-fast acetate dyes, known as Interchem Acetate GSF Dyes, is suitable for dyeing or printing acetate fabrics in shades from pastels to blacks. The dyes in this series are especially useful for dyeing or printing dress goods, suitings, sportswear, beachwear, and other materials requiring a high degree of fastness.

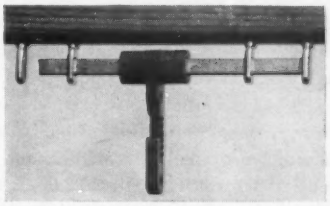
The new dyes have been found suitable also for Arnel, Dynel, and Acrilan. The Blue GSF and Yellow GSF can be employed on Dacron.

Interchemical Corp., Textile Colors Div., Hawthorne, N. J.

More Data? Write ◂ or use card, p. 163; list F-116

Nylon Hook for Slide Hook Harness Frames

A new hook for use with slide hook harness frames consists of a metal core entirely covered with nylon. Unlike conventional slide hooks, there is no contact of metal with metal and,



therefore, considerably less friction and wear.

The hook positions itself promptly and prolongs the life of slide and heddle rods. It is interchangeable with most types now in use.

Emmons Loom Harness Co., Lawrence, Mass.

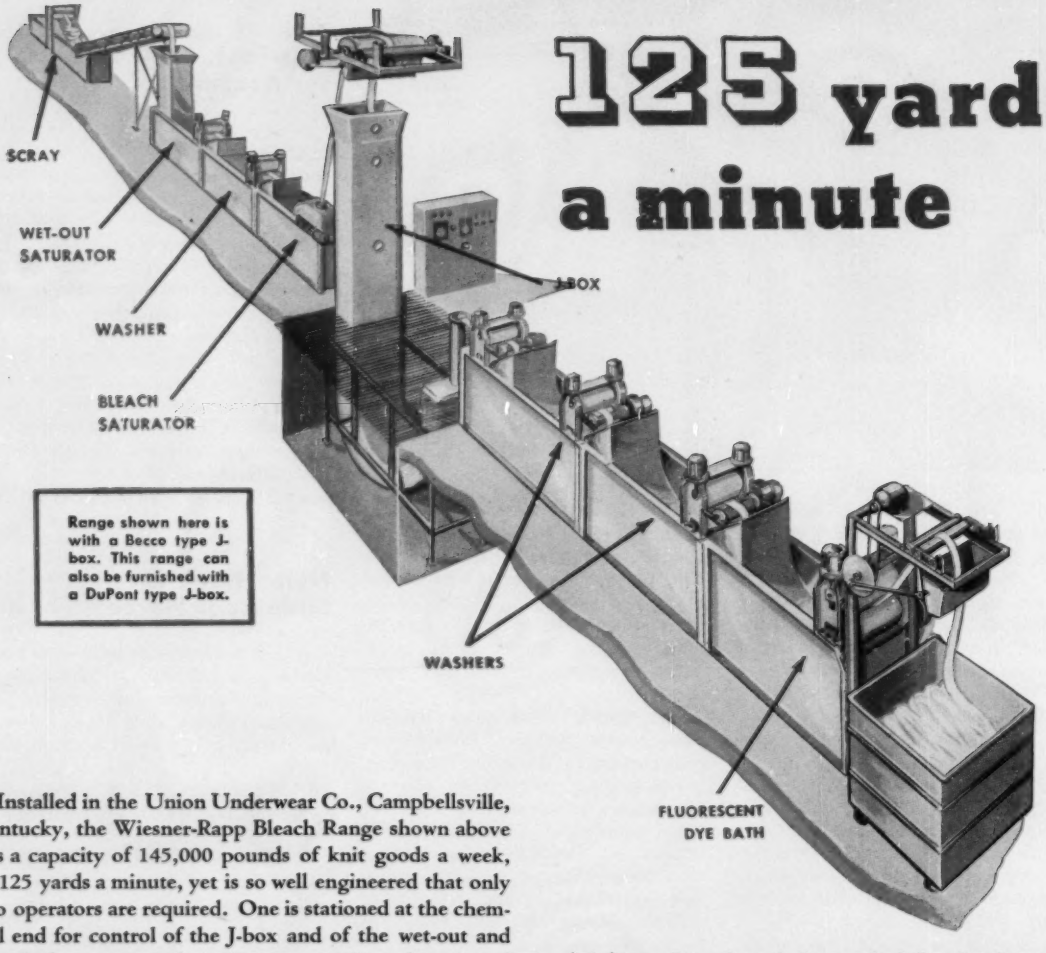
More Data? Write ◂ or use card, p. 163; list F-115

Eight New Nylon Yarns

Commercial availability of eight new nylon yarns developed to meet requirements in a variety of textile and industrial applications was announced recently.

Of special interest to the hosiery industry is a 7-denier monofilament

Knit Goods Processed at 125 yards a minute

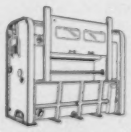


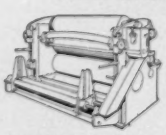
Range shown here is with a Becco type J-box. This range can also be furnished with a DuPont type J-box.

Installed in the Union Underwear Co., Campbellsville, Kentucky, the Wiesner-Rapp Bleach Range shown above has a capacity of 145,000 pounds of knit goods a week, or 125 yards a minute, yet is so well engineered that only two operators are required. One is stationed at the chemical end for control of the J-box and of the wet-out and chemical saturators; the other operator is at the exit end to control washers, fluorescent baths and delivery. The stainless steel units are compactly built in a straight line, 88 feet long, to avoid turns which might possibly distort the cloth. The complete bleach and wash cycle requires only one hour. Running speeds of each section are independently controlled from separate control panels.

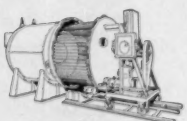
Here is a bleach range that minimizes tension and shrinkage. It makes cloth wonderfully absorbent, soft, and uniformly white. Knit goods bleached by the continuous process has a better hand and is more uniform in quality than goods finished by kier bleaching. And, this Wiesner-Rapp range smooths out many production problems by keeping cutters and sewers well supplied with finished material. For further information, consult Wiesner-Rapp Co., whose technical staff is always ready to help you.

OTHER WIESNER-RAPP MACHINES


TIGHT-STRAND WASHER


3-ROLL PADDER

DYE BECK


BAROTOR

THE WIESNER-RAPP CO., INC.
1608 SENECA ST., BUFFALO 10, N. Y.
Manufacturers of Wet-Finishing and Dyeing Machinery

which offers wide opportunities to the manufacturer looking for variations in weight and effect.

For tricot knitters, 20-denier, 7-filament yarn now available in dull luster offers heightened opacity. New luxury in a variety of fabrics is possible through use of a new, semi-dull, fine-filament yarn in 30/26 count, while the semi-dull, 60-denier, 20-filament yarn provides interest in fancy woven applications and service-weight hose. Another count, 80/26, gives a new, crisper yarn for use in woven goods and for heavier hosiery welts.

Useful in sewing thread and various military uses is a new high tenacity yarn available in 140-denier, 68-filament count.

In the heavier deniers, a 10-denier-per-filament yarn, in 200-denier, 20-filament, contrasts with present upholstery yarns of 2 to 6 deniers per filament. For industrial applications in netting, cordage, woven duck, and similar heavy-duty applications is the 15,120-denier yarn of 2,520 filaments.

Textile Fibers Dept., E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

More Data? Write ◂ or use card, p. 163; list F-117

Top Roll Reversing Mechanism for Novelty Twister

A top roll reversing mechanism applicable to Collins Bros. novelty yarn twisters equipped with the Ultrohead attachment (described in TI for September, 1954, page 198) makes possible the production of a nubby effect which does not require a binder. Also, some types of novelty yarns which ordinarily require two processes of twisting can be produced in one operation through use of the reversing mechanism in conjunction with the Ultrohead.

The conventional Ultrohead attachment provides three speeds on both lines of feed rolls. When equipped with the new top roll reversing mechanism, four speeds can be obtained—three forward speeds on each line of feed rolls and one reversing speed.

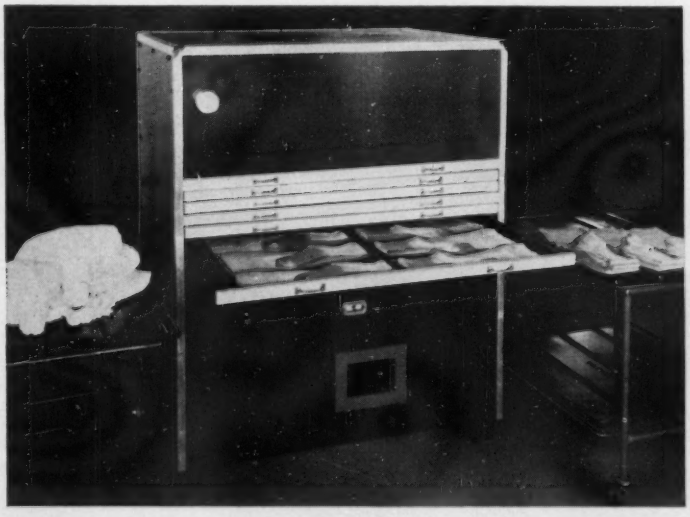
Collins Bros. Machine Co., Pawtucket, R. I.

More Data? Write ◂ or use card, p. 163; list F-118

Boardless Dryer Yields Stockings with Softer Hand

The Turbo Boardless Dryer for manufacturers who want a substitute for final boarding offers economies inherent in this method of finishing, but gives stockings a softer hand and more pleasing finish than is customarily achieved without the use of boarding forms.

Drying is done in a six-drawer cabinet. Each drawer is loaded and unloaded in rotation, thereby making the operation a continuous one. This arrangement allows for a comparatively long drying cycle per drawer with no time lost waiting for drying to be completed.



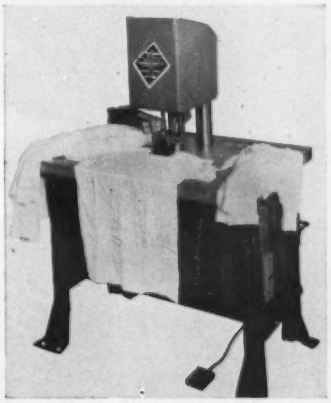
Comparatively low drying temperatures protect the delicate fabrics. Heated air is circulated gently through the drawers—there is no high pressure air volume. Stockings remain smooth and unwrinkled, ready for pairing and boxing.

Production of the dryer is up to 500 dozen pairs of stockings in 8 hours. Machine capacity is 18 dozen pairs—3 dozen in each of 6 drawers. Steam pressure required is approximately 15 psi. Only 12 square feet of floor space is required. Steam consumption is low. There are no appreciable heat losses. Unskilled labor can easily operate the unit.

Turbo Machine Co., Lansdale, Pa.

More Data? Write ◂ or use card, p. 163; list F-119

High Speed Automatic Labeling Machine



A machine for the high speed application of Prestomark labels has been introduced.

Primary function of the precision labeling unit is to combine the optimum in flexibility and operating ease while automatically applying labels to an unlimited variety of knitwear and flat woven goods of both natural and synthetic yarns. Labeling may be accomplished during the production process or from folded stock with split-second changeovers in label dimensions made possible by magazine loading of the labels.

Unit incorporates new principles of heat control, dwell time, and hydraulic pressure to guarantee greater label adhesion to the fabric to be trademarked by reducing dwell time, thus effecting extremely rapid labeling.

Still another outstanding feature of

BRIGHTENING AGENT FOR PAD OR MANGLE APPLICATION ON COTTON OR RAYON FABRICS; APPLIED ALONE OR WITH RESIN, STARCH, SOFTENER, FILLER, ETC.

BLANCOPHOR HS-71 AND HS-76 ARE UNIQUE BECAUSE OF THEIR EXCEPTIONALLY HIGH SOLUBILITY IN WATER.

BRIGHTER FABRICS WITH

Blancophor® HS

THE OPTICAL WHITENING AGENT

PRODUCE BRILLIANT WHITES ON BLEACHED TEXTILES.

BLANCOPHOR HS BRANDS ARE LEVEL DYEING AND ARE RECOMMENDED FOR USE ON ALL TYPES OF EQUIPMENT, SUCH AS JIG, REEL AND PACKAGE MACHINE.

WRITE TODAY FOR COMPLETE INFORMATION ON BLANCOPHOR HS-71 AND BLANCOPHOR HS-76.

ANTARA

From Research to Reality

ANTARA® CHEMICALS

A SALES DIVISION OF GENERAL ANILINE & FILM CORPORATION

435 HUDSON STREET
NEW YORK 14, NEW YORK

SALES OFFICES: NEW YORK · BOSTON · PROVIDENCE
PHILADELPHIA · CHARLOTTE · CHATTANOOGA · CHICAGO
PORTLAND, OREGON · SAN FRANCISCO · LOS ANGELES

IN CANADA: CHEMICAL DEVELOPMENTS OF CANADA LTD., MONTREAL

the labeling machine is the heat sealing of two ends of the label in a fashion identical to the sewing of a hanger label. Operating speeds on light weight woven goods of well over 500 dozen applications per 8 hour day have been easily achieved.

Laundry and dry cleaning tests have demonstrated that a permanent seal is assured with the new unit when the simple operating instructions are followed.

Kaumagraph Co., Wilmington 99, Del.

More Data? Write ◂ or use card, p. 163; list F-120

Eliminate Cloth Soilage Due to Temples with New Underslung Type

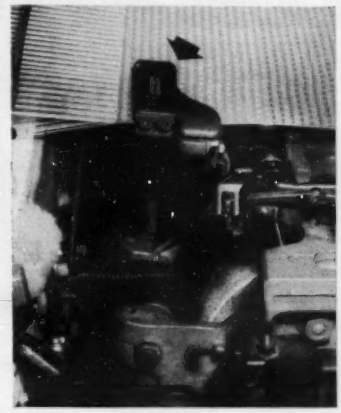
The design of a new Draper underslung temple completely eliminates the chance of oil, rust or dirt getting on the cloth from the temple.

No lubrication is necessary, and temples will not wear out of line.

These features are made possible by the use of torsional rubber bearings mounting the temples on shafts below the cloth.

The new scissors-type thread cutter included in this assembly permits the filling to be cut closer to the selvage, thus reducing the danger of drag-ins.

The underslung temple is currently available for XD model looms equipped with center fork filling motion.



Draper Corp., Hopedale, Mass.

More Data? Write ◂ or use card, p. 163; list F-121

Rubber Raschel Knitter Provides Finer and Higher Production

With the newly designed Hofmann-Mayer rubber Raschel knitting machine—which is particularly suited for the manufacture of all kinds of rubber Raschel fabrics, curtain and net goods, patterned tulles and laces, glove fabrics, shoe top materials, upholstery, sports cloth, outerwear, and underwear—uniform fabric production is assured by positive warp drive and draw off.

Easy access to the knitting elements from the back of the machine, even while it is operating, means less interference with the various yarn sheets. Simplicity of maintenance and adjustments permits more production time for the machine, plus greater efficiency.

Set up for plain fabric, with four bars, the machine can be operated at speeds up to 500 courses per minute. It is available with 4, 6, 8 or 10 guide bars, 100" or 124" wide, 24 gauge to 44 gauge.

Alfred Hofmann & Co., 629-635 59th St., West New York, N. J.

More Data? Write ◂ or use card, p. 163; list F-122

Low-Cost Way to Grind Shell-Less Top Rolls

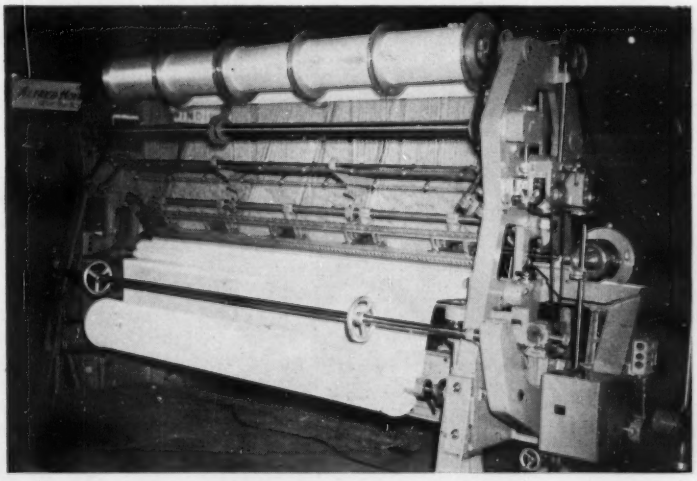
A new cot buffing attachment for use by mills in grinding their shell-less top rolls is a precision ground assembly which fits on standard Armstrong lathes and Dayco buffing machines, thus permitting mills to buff their rolls on a regularly scheduled maintenance basis without having to make a heavy equipment investment.

Emphasizing that the new unit is not recommended for buffing shell-type top rolls, the manufacturer points out that it may also be used for taking scratches off hardened steel solid rolls.

The top rolls are driven directly by the weighted pressure roll—an arrangement which allows each roll to be buffed accurately and easily under conditions simulating those found on roving and spinning frames.

Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

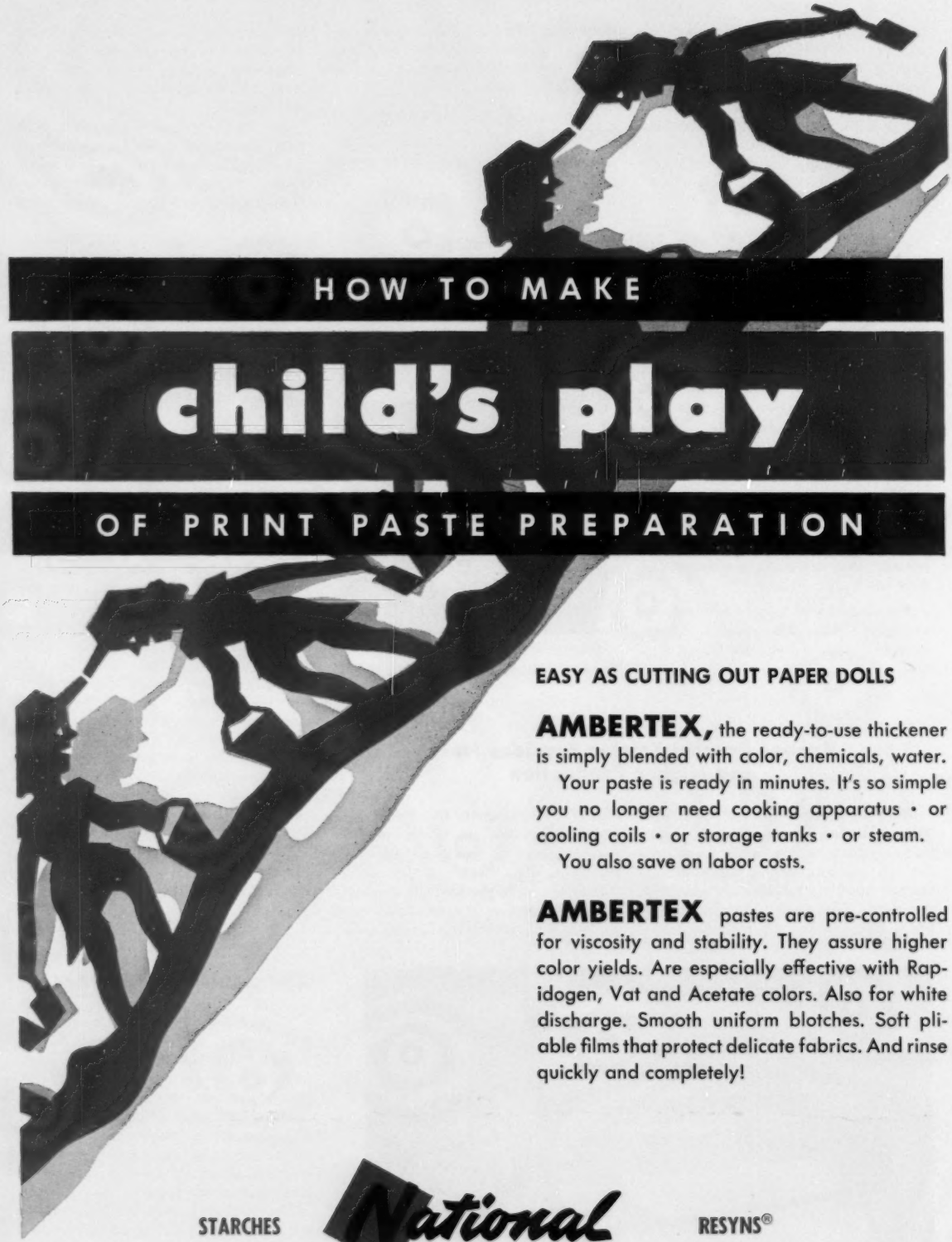
More Data? Write ◂ or use card, p. 163; list F-123



Chemical Soil Retardent

A chemical which can keep rugs and carpets, fabrics, painted walls, paper, and other surfaces clean and fresh-looking even when dirt is applied directly to them is called "Ludox" colloidol silica. Formulations of Ludox are commercially available for treatment of rugs, carpets, and upholstery materials by the manufacturer and in the home.

The chemical does its work as a soil retardant by filling up the microscopically small pits and crevices, known as soil receptor sites, that all surfaces possess in varying degree. Dirt particles become embedded in these sites, making them difficult or impossible to remove by ordinary



HOW TO MAKE

child's play

OF PRINT PASTE PREPARATION

EASY AS CUTTING OUT PAPER DOLLS

AMBERTEX, the ready-to-use thickener is simply blended with color, chemicals, water.

Your paste is ready in minutes. It's so simple you no longer need cooking apparatus • or cooling coils • or storage tanks • or steam.

You also save on labor costs.

AMBERTEX pastes are pre-controlled for viscosity and stability. They assure higher color yields. Are especially effective with Rapidogen, Vat and Acetate colors. Also for white discharge. Smooth uniform blotches. Soft pliable films that protect delicate fabrics. And rinse quickly and completely!

STARCHES **National** STARCH PRODUCTS INC. RESYNS®

National Starch Products Inc., 270 Madison Ave., New York 16, N. Y. • Atlanta • Boston • Philadelphia • San Francisco
In Canada: National Adhesives (Canada) Ltd., Montreal

methods. Once the tiny particles of silica fill the soil receptor sites, the dirt can literally find no place to go, and must remain on the surface, where it can be removed easily.

First commercial application of this anti-soil chemical has been made by the floor covering industry. The treatment of pile fabrics with a colloidal silica for imparting soil resistance was first disclosed in a patent issued to Mohawk Carpet Mills, Inc. Soil retardants based on Ludox are now being applied to new rugs and carpets by a number of leading manufacturers who have been licensed under the Mohawk patent.

Grasselli Chemicals Dept., E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

More Data? Write ◂ or use card, p. 163; list F-124

New Finisher Roll Improves Size Application, Cuts Upkeep

Mills with earlier model Saco-Lowell slashers can now obtain considerable maintenance savings and improved sizing performance by replacing their finisher squeeze rolls with the new "Multi-Duro" slasher roll which is one of the outstanding features of the new Saco-Lowell "Positrol" hot air slasher (described in TI for April, 1955, page 214).

Made of specially treated rubber that will not blister and should not require grinding for at least two years, this new roll will (1) improve evenness of yarn coming from the slasher, (2) reduce the size consumption, and (3) cause less shedding.

The improved performance of the roll is attributed to the special rubber wall, from ⅜" to ½" thick as required over the metal core, of graduated hardness to medium density from the core to the outer surface. This graduation of hardness deflects the internal shock waves produced in the act of squeezing the size into and away from the yarn.

Because the softer outer rubber area can definitely fill a major part of the empty space between each end of yarn during the nip, so that it separates the size solution around each yarn strand, there is no room for "bridges" of size to form between the individual ends. The yarn sheet emerges from the finisher rolls with each end separated from neighboring yarns.

At the same time, the rubber has built into itself sufficient hardness to give a smooth, well-rounded size application. Drying is more uniform. Work of split rods is reduced.

Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

More Data? Write ◂ or use card, p. 163; list F-125

New Bemberg and Metlon Combination Yarn

An interesting new yarn has been developed. The combination is made with a nubby yarn in Bemberg's nubbi, cupione or flake qualities and Metlon's 1/64" or 1/80" metallic filament. It is available in sizes from 40 denier cupione to the 5000 denier Dream Slub. Depending on the yarn size, it can be used for all types of wearing apparel in the finer twists and in upholstery and drapery fabrics in the heavier twists.

The yarn may be used on either knitting or weaving equipment and produces an unusual textured appearance.

Metlon Corp., 432 Fourth Ave., New York 16, N. Y.

More Data? Write ◂ or use card, p. 163; list F-126

New Pad Dye Process

A new process for obtaining complete uniformity of shade when padding light to dark colors has been announced.

Aulabrite Pad Dye Process #18, as the new system is called, produces extremely low crock and excellent fastness to light, washing, and dry cleaning. It was designed for the application of Aulabrite 3000 Series colors.

More Data? Write ◂ or use card, p. 163; list F-127

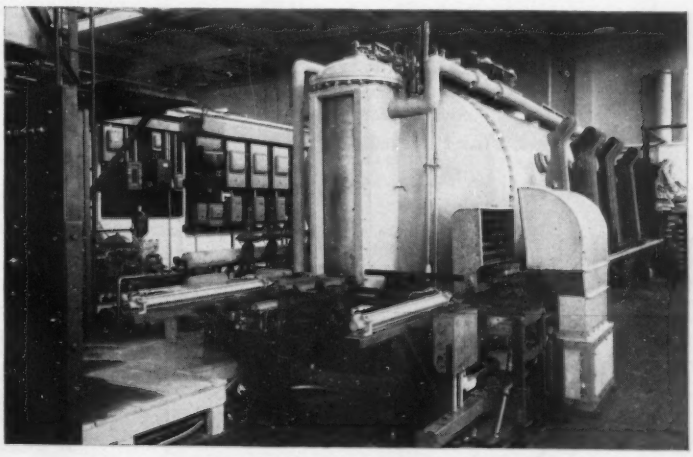
Machine Sets, Dyes, and Finishes Hosiery Automatically and Continuously

With one "Electrocolorset" machine for setting, dyeing, and finishing hosiery made from synthetic fibers in one automatic and continuous operation, it is possible to process from 100 to 120 dozen pairs per hour, with eight operatives (five boarders, two stripper-sorters, and one operator-colorist). With multiple machine operation this may be further reduced.

This process produces absolutely first quality work from the standpoint of both physical appearance and color value.

Tangible savings of from 20¢ to 45¢ per dozen pairs are realized in labor and materials. Further savings are realized from (1) improved production control, (2) reduction in material handling, (3) reduction in pairing labor, (4) reduction in level of inventory, (5) reduction in mending and regrading, and (6) reduction in floor space.

Great flexibility and speed in changing to meet fast moving markets is another significant advantage of the equipment. A new color can be coming off the machine in a matter



336,000 miles of extrusions!

Our extruders have turned out enough plastic and rubber extrusions to reach to the moon and halfway back. In compiling this vast experience General Tire's Industrial Products Division has supplied thousands of original equipment manufacturers with just about every known type of extrusion. No job is too large, too small or too complicated for our design and production staff. Perhaps *you* can benefit from the fantastic extrusion mileage we've accumulated down through the years.

For literature or further information write to The General Tire & Rubber Company, Wabash, Indiana, Department G.

"From Plans to Products in Plastics and Rubber"

THE GENERAL TIRE

Industrial Products Division

WABASH INDIANA

MORE production LOWER costs!

With

Gastonia

TEXTILE SHEET METAL PARTS

Cylinders

For continuous, high-speed production . . . at lower costs . . . top performance of your Spinning, Twister, Spooler and Quiller Cylinders is a must.

Gastonia Cylinders are dynamically balanced and scientifically tested for better performance.

We manufacture, repair and rebuild cylinders to your specifications.

GASTONIA Cylinders—like all other GASTONIA Products—are made of the finest materials by highly skilled workmen with precision machinery.

Many years of practical experience go into every product.

CARD SCREENS
Standard type rib or perforated—cut and assembled on special precision-built jigs.

SCREENS
Picker, Condenser and Waste Machine Screens of maximum strength and durability.

ASPIRATORS
Precision manufacturing methods assure proper shape and balance of Aspirators and Aspirator Dampers.

LAP CONDUCTOR TINS
WASTE CHUTE COVERS
WASTE CHUTES
SLIVER PANS
BACK TINS

COMBER RENEEDLING
Top Combs, Half Laps and Winder Guide Combs precision-rebuilt of top quality materials to manufacturer's standard specifications. Imported English needles of tempered high-tensile steel used exclusively.

Gastonia TEXTILE SHEET METAL WORKS
Gastonia, North Carolina

A sheet metal works serving textile mills

of less than four minutes after the change, and this color is on shade by the pre-setting of the colormeter. Also, the establishment of new shade standardization can be a matter of minutes per shade, with the finished hose being immediately available for examination and change.

Flow of Goods. The grey work is taken from the bins in back of the operator and boarded on forms of specified size which are mounted on a truck, 24 forms per truck. When completely boarded, the operator pushes the truck to the adjacent conveyor which, in turn, automatically transfers the loaded truck to the main conveyor. In the meantime, the next empty set of forms is automatically placed in boarding position.

The loaded truck then passes down the main conveyor to a boarded truck storage area. A pre-rinse section may be installed at this point to pre-scour, smooth, and pre-shrink the leg and welt. From here, the truck goes automatically through pressure equalizing locks into the main pressure chamber where the hose are successively scoured, rinsed, and dyed under pressure of from 7 to 30 psi. The dye color and shade are controlled automatically by a combined optical and electronic system to deliver constant and reproducible results.

After the dyeing stage, the truck moves once more through pressure equalizing locks from the main chamber to the outside. From here, the passage is through a finishing chamber and dryer. The finished hosiery is now ready for the stripping station.

Here the trucks with the empty forms of definite size are taken automatically by the main conveyor and distributed to the proper foot size station, and the cycle is now ready to start over.

Dyeing and Color Control. The principle of operation is quite simple and is based on the fact that dye of given concentration, distributed uniformly under constant conditions of pressure, temperature, and pH, must dye uniformly. Following this premise, the concentration of dye is maintained constantly by a technique known as transmission colorimetry, using a three-basic-dyes color control system.

Briefly, the system works as follows. Samples of dye solution are taken continuously and compared to an optical standard that can be preset to produce any commercial color and shade. Every twelve seconds, each of the three colors are compared to the standard, and, if found deficient, color is added as required. Under operation, colors are continuously and automatically added to maintain this concentration as the dye exhausts on the stockings, thus reducing tremendously the variables of normal dyeing methods.

Proctor & Schwartz, Inc., Philadelphia 20, Pa.

More Data? Write ◆ or use card, p. 163; list F-128

Equipment Briefs

An improved spinning frame replacement item for mills needing more precise taper control is the **double-pawl pick motion** applicable to the standard builder assembly. It (1) gives greater flexibility and more precise control of taper and overall shape of bobbins being built; (2) eliminates ragged and uneven bobbins, especially in the coarser counts, and (3) provides for increased yardages on bobbins without causing sloughing and tangling during spooling or rewinding.

Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

More Data? Write ◆ or use card, p. 163; list F-201

Suitable for measurement of very small leakage currents through insulation at any voltage level is the new "Takk" **Ultra Sensitive Current Meter** (Model 63). Rugged; weighs only 8 pounds; versatile—can be used in any application which calls for detection and measurement of very small d-c currents with high accuracy.

The Hewson Co., Inc., 443 Broad St., Newark 2, N. J.

More Data? Write ◆ or use card, p. 163; list F-202

A new **vinyl protective coating** that makes possible a sharp reduction of labor costs is called "Amercoat" No. 87. Can be applied at a thickness of 10 mils in a single double-pass spray coat, without sacrificing moisture and chemical resistance. Easily applied with industrial spray equipment. Does not flow away from edges and sharp corners.

Amercoat Corp., 4809 Firestone Blvd., South Gate, Calif.

More Data? Write ◆ or use card, p. 163; list F-203

Creasing of pockets, flaps, and cuffs is speeded and simplified when the new Silverman "Creasematic" featuring eye level tilted top is utilized. For the operator it shortens hand travel, makes feeding easier and faster, reduces fatigue.

J. Silverman & Son, 3905-15th Ave., Brooklyn 18, N. Y.

A new **neutral wool scouring process** involving no alkali or salt of any kind is based upon a detergent called Lavepon WS-1. Principal advantages of the process are: significant improvement in color and loft of scoured wool; increased staple length of fiber due to elimination of alkali damage; costs comparable to or lower than an alkali scour; greater production per train because of the faster drying rate the process makes possible.

Rohm & Haas Co., Washington Square, Philadelphia 5, Pa.

More Data? Write ◆ or use card, p. 163; list F-204

Time and money can be saved in textile manufacturing plants where fabrics are converted to finished garments when a new **automatic cut off** is utilized. This compact, independently powered cutting device is available in two basic models applicable to a variety of cutting operations. Model 500 ES eliminates the extra handling and the extra operation of separating, whenever operators "chain off," this machine automatically cuts chain between parts or between whole garments; as an attachment, it works directly on the sewing machine separating elastic, tapes, or bindings of all kinds up to 2½" wide. Model 500 VL cuts precise lengths required—this adjustable length cutter can be used to cut lengths of elastic, tapes, bindings or ribbons up to 2½" wide; simple movement of adjusting lever varies length of cut from ¼" to 100"; can be readily moved to operate as an individual unit or as an attachment to a sewing machine.

Clinton Industries, Inc., 1 W. 34th St., New York 1, N. Y.

More Data? Write ◆ or use card, p. 163; list F-205

An **anti-friction bearing for the outrigger end of the main drive shaft** of roving frames can be applied to Saco-Lowell frames now running with direct drive to eliminate bearing wear at the outrigger. Gives smoother performance, requires less power, eliminates an oiling point, and assures a free-running drive at all times.

Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

More Data? Write ◆ or use card, p. 163; list F-206

Especially recommended **for blocking sweaters** is a newly designed blocking press which features a cold

wooden head that imparts a fine, fluffy finish to the garment. Has automatic timer, permitting press to complete its entire operating cycle automatically once the head is closed.

New York Pressing Machinery Corp., 880 Broadway, New York 3, N. Y.

More Data? Write ◆ or use card, p. 163; list F-207

An improved **automatic cuff cutting and folding machine,** used primarily for gloves, mittens, and outerwear, will handle circular cuffs or sewed cuffs. Can be easily changed from one width or length to another as desired. Cuts and folds at rate of 42 cuffs per minute. Occupies only 2′ x 7′ of floor space.

J. A. Firsching & Son, Inc., 421-423 Broad St., Utica 2, N. Y.

More Data? Write ◆ or use card, p. 163; list F-208

A new **center wind beaming and railway sewing machine** features constant cloth speed, near constant cloth tension without adjustment, and a railway type sewing machine fitted with either a butt-seam or chain-stitch head with automatic return to the starting point, and scray or cradle to hold the pieces as they are unrolled. This scray is designed to prevent the cloth core from jumping out. Operates at 200 ypm.

Birch Brothers, Inc., 32 Kent St., Somerville 43, Mass.

More Data? Write ◆ or use card, p. 163; list F-209

A new, **dull, continuous filament yarn** with outstanding sunlight resistance is designated as Type 680 and offers improved whiteness retention characteristics during processing and in use. Produced with one-half Z twist and packaged on bobbins, it is available in 40-denier, 13-filament and 70-denier, 34-filament counts.

Textile Fibers Dept., E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

More Data? Write ◆ or use card, p. 163; list F-210

"Melltone RH," a **non-ionic softener** readily dispersible in water at 80 - 90 F, is completely compatible with products normally encountered in wet processing, has no deleterious effect on light fastness, can be applied on high speed equipment and closed pressure machines. Outstanding as straight finish with excellent anti-static properties since there is no problem of color reversion or odor development due to ageing. Resists scorching; facilitates high speed sewing and cutting of fabrics.

Crown Chemical Corp., 240 India St., Providence 3, R. I.

More Data? Write ◆ or use card, p. 163; list F-211

A new **sequestering agent,** Kalex CUL, shows powerful ferric iron chelating power in addition to potent alkaline earth chelating action.

The Hart Products Corp., 1440 Broadway, New York, N. Y.

More Data? Write ◆ or use card, p. 163; list F-212

New **comber tools** available include an angle gauge for easy and accurate setting of the top comb, nipper motion timer wrench, and a specially designed hollow socket wrench and extra long screw driver assembly for setting nipper frame stop screws.

Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

More Data? Write ◆ or use card, p. 163; list F-213

A new type **bunter** of sponge leather is available in three sizes for use on pickers with rod diameters of 7/16", ½", and ⅝". The Garland Bunter is made from Swiss bull shoulders, and pre-testing in mills has proved its durability and economy. The unit is sold on a per pound basis, and weight of each is approximately ½ pound. Garland also manufactures washers of the same material, to keep bunter to required lengths.

Textile Division, Garland Manufacturing Co., Saco, Maine.

More Data? Write ◆ or use card, p. 163; list F-214

Cut sewing time and costs wherever sharp, well defined corners appear with a new **needle positioner** which automatically positions the sewing machine needle either up or down as required. Operators' normal sewing procedures remain unchanged. Easily installed under table on either group line drive or independent clutch motor systems.

Clinton Industries, Inc., 1 W. 34th St., New York 1, N. Y.

More Data? Write ◆ or use card, p. 163; list F-215

A **steel gap gear arrangement** which overcomes the troubles sometimes found on cast-iron gears is now available as a replacement item for all Saco-Lowell roving frames. The new hardened steel cut tooth gear decreases maintenance costs by reducing wear and preventing breakage of teeth.

Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

More Data? Write ◆ or use card, p. 163; list F-216

A four-color transfer that can be rapidly and economically applied to fabrics made from natural and synthetic fibers is available. Manufacturer's creative department assists in development of exclusive designs which can be printed in any combination of four attractive colors.

Kaumagraph Co., Wilmington 99, Del.

More Data? Write ◆ or use card, p. 163; list F-217

A new **anthraquinone vat dye,** National Carbanthrene Black Brown VA Paste, produces on cotton and rayon blackish brown shades of maximum fastness to light and excellent fastness to most wet processing, including boiling soap and stoving. Recommended for coloring materials to be resin finished for crease resistance and for materials that must possess exceptional fastness to light and commercial laundering.

National Aniline Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.

More Data? Write ◆ or use card, p. 163; list F-218

A **needle positioning clutch motor,** called "stopright," stops the sewing machine needle automatically either in or out of the work. Frees operator's hands to handle work faster and more efficiently. Adaptable to most sewing machines. Since device is directly powered, no other belts are required, and the entire power mechanism is installed under the sewing table out of the way.

American Safety Table Co., Inc., 224 Fifth Ave., New York, N. Y.

More Data? Write ◆ or use card, p. 163; list F-219

A **watchman's clock with a three-day dial** enables him to record his rounds for three full days (72 hours) before it is necessary to change the dial. Thus it is unnecessary for anyone to have to visit the plant over a week-end or on holidays for the purpose of changing the dial. Dial can also be changed daily if preferred. Called the Vanguard, it has a patented registering mechanism allowing use of station keys with female engraved numerals. Foolproof.

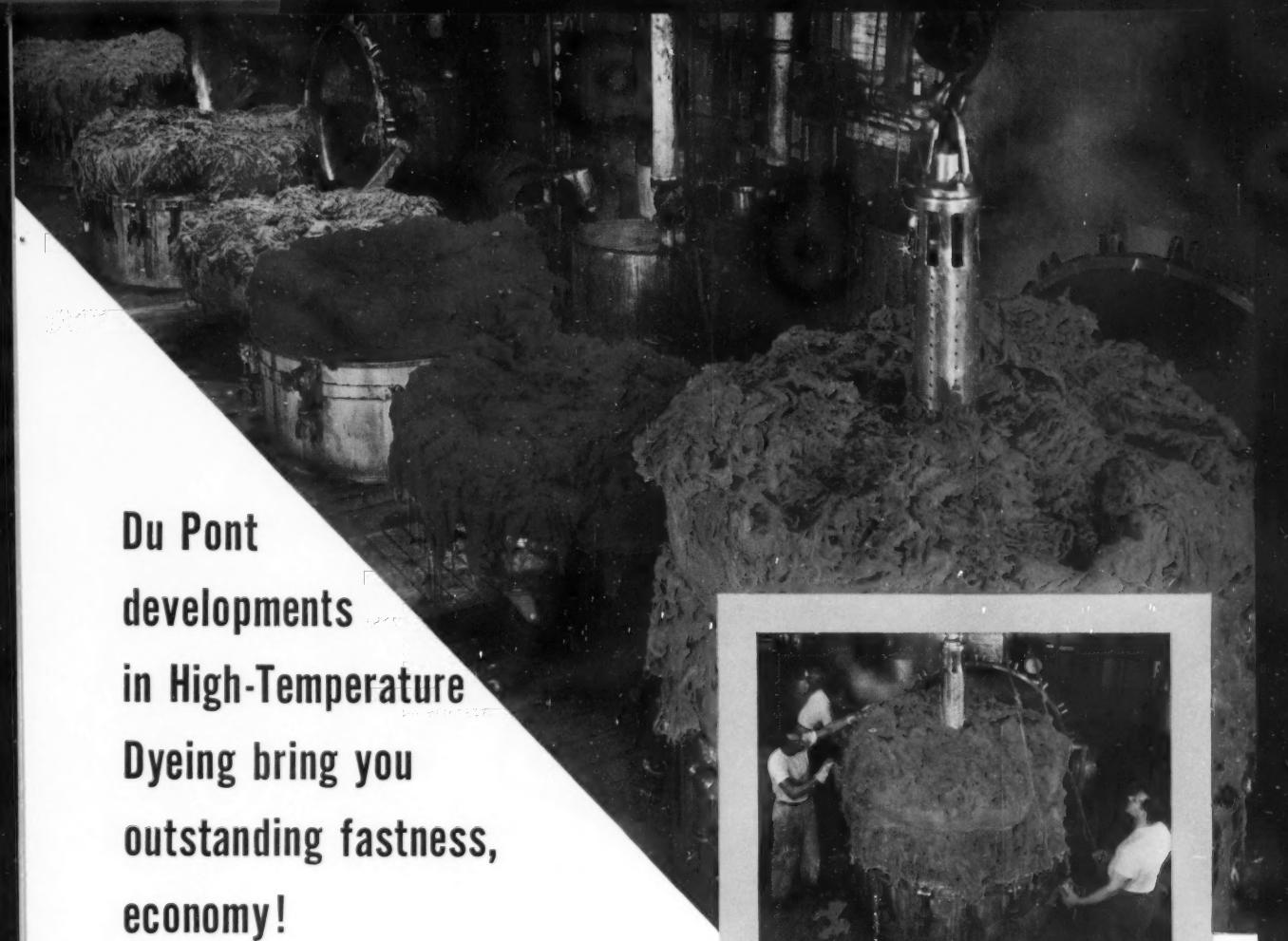
The Lathem Watchmans Clock Co., 76 Third St., N. W., Atlanta, Ga.

More Data? Write ◆ or use card, p. 163; list F-220

Moderately bright shades of green are yielded on cotton, rayon, and leather by National Solantine Green BL, a new non-dusting, **fast-to-light direct dye** possessing excellent solubility. Fast to rubbing, stoving, dry and wet heat, dry cleaning, and perspiration. Excellent fastness to water and sea water. Suitable for coloring carpet yarns, hosiery, bathing suits, upholstery, and materials to be rubberized.

National Aniline Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.

More Data? Write ◆ or use card, p. 163; list F-221



Du Pont developments in High-Temperature Dyeing bring you outstanding fastness, economy!

The hydrophobic properties of the new synthetic fibers created great problems for the dyeing industry. Dyers found that with fibers such as "Orlon" acrylic fiber and "Dacron" polyester fiber, duplication was often impossible... fastness standards were sometimes barely acceptable... methods proved much too costly.

One method for dyeing these hydrophobic fibers at elevated temperatures was developed by Du Pont technicians in their laboratory to help overcome these problems. But the proof of this new method had to be made in commercial dyeings. One of the early conversions to high-temperature dyeing of stock was made at the Fred Whitaker Company, where these pictures were taken. The method proved successful, not only for dyeing hydrophobic fibers, but also for wool — both in stock and yarn form.

• No matter what type of fiber you are dyeing, this new high-temperature stock-dyeing method may save you time and money, too. Du Pont will be glad to help you determine how you can adapt this method to your dyeing, or to give you specific information on the proper procedure in dyeing your fibers by this method. Get in touch with your Du Pont representative or write to: E. I. du Pont de Nemours & Co. (Inc.), Dyes and Chemicals Division, Wilmington 98, Delaware.

Du Pont Dyes

Improved results with high-temperature stock dyeing:

for **NYLON**

— the dye penetrates more quickly into the fiber, giving higher light fastness and wet fastness for the colors.

for **"DACRON"** *

— a carrier for the dye is no longer necessary, with better light fastness resulting.

for **"ORLON"** †

— dyeing time is shortened considerably, using either the cuprous ion method, or the new "SEVRON"‡ dyes which Du Pont engineered specifically for "Orlon."

for **WOOL**

— dyeing and chroming time is reduced greatly.

* "DACRON" is Du Pont's registered trade-mark for its polyester fiber.
† "ORLON" is Du Pont's registered trade-mark for its acrylic fiber.
‡ Reg U. S. Pat. Off.

DU PONT
REG. U. S. PAT. OFF.

Better Things for Better Living . . . *through Chemistry*

Let
WEST POINT
Supply Your
LOOM BEAMS
Standard or Special

Prompt Quotations on Delivery and Price

LOOM BEAM HEADS

- Cast iron heads with cast tooth gear or cut tooth gear.
- With or without recess for beam barrel.
- Cast iron heads with friction drum for friction let-off.
- Steel plate heads with cast iron gear or friction drum.
- Many standard patterns available for prompt service. All sizes—18″ to 36″ diameter.
- Special heads to your specifications.
- Heads made of high grade cast iron; well molded teeth if sand tooth—or accurately machined if cut tooth.

LOOM BEAM BARRELS

- Long-life aluminum beam barrels carried in stock.
- Wooden beam barrels to your specifications.

ONLY WEST POINT MAKES ALL 7 SLASHERS

WEST POINT FOUNDRY & MACHINE CO.

WEST POINT, GEORGIA

HELPFUL BOOKLETS FREE!

On this and the following pages is an excellent library of free textile literature. Select the books which will be helpful to you and list their numbers on the coupon.

Mail to TEXTILE INDUSTRIES

★ ★ ★ ★ ★ ★ ★ ★ ★ ★

7-1 Lug Support Hangers. Information now available from D & J Manufacturing Co. giving details, advantages and prices of their "Holdfast" lug support hangers. Write D & J Manufacturing Co., P. O. Box 1281, Rome, Georgia.

7-2 Compressed Air Handbook. Handbook features cooling controls for compressor jackets, aftercoolers and intercoolers. Contains hook-up sketches to help users improve capacity of installations. Write Sarco Co., Inc., Dept. P, Empire State Bldg., New York 1, N. Y.

7-3 Controlled Volume Pumps in Water Treating. Milton Roy bulletin 953 describes and illustrates how controlled Volume Pumps are used in typical industrial water treating systems. Write Milton Roy Co., Station E., 1300 East Mermaid Lane, Philadelphia 18, Pa.

7-4 Better Flyer and Spindle Efficiency. Entertaining booklet by Ideal Machine Shops gives facts about Flyers and Spindles which have helped many mills gain more efficient production, better yarn quality. Write Ideal Machine Shops, Inc., Bessemer City, N. C.

7-5 Hermetic Centrifugal Refrigeration Unit. Color booklet contains engineering specifications, capacities, dimensions, advantages, etc., of the Trane Centravac. Write for Bulletin DS-399, The Trane Co., LaCrosse, Wisconsin.

7-6 Electrical and Lubricating Devices. Catalog contains complete and descriptive data on all Trico electrical and lubricating devices. Profusely illustrated, it contains list price information. Write Trico Fuse Mfg. Co., North 5th at West Chambers, Milwaukee 12, Wisconsin.

7-7 Bronze Globe Valve. New literature by Lunkenheimer describes the LQ600 valve, the first bronze globe valve with Brinalloy seats and discs. Gives applications and advantages. Write Lunkenheimer Co., Box 360, Cincinnati 19, Ohio.

7-8 Conveyors for Textiles. Catalog shows pictures of Standard Conveyor and Pneumatic Tube installations in various applications. Can cut cost of materials handling. Write Standard Conveyor Co., North St. Paul 9, Minn.

7-9 Oleic Acids. Brochure titled "Emersol Oleic Acids" covers the various means of evaluating oleic acids with emphasis on end product performance. Many useful charts included. Write Emery Industries, Inc., Dept. 5, Carew Tower, Cincinnati 2, Ohio.

7-10 Controlled Sizing. Brochure in color describes the legend, operation and specification of the new Griffin Size Machine. Features most important basic improvements in size machines in many years. Write Ira L. Griffin & Sons, P. O. Box 1576, Charlotte, N. C.

7-11 Tips on Seaming Nylon Stretch Hosiery. Pamphlet lists in detail observations and suggestions on seaming nylon stretch hosiery prepared by Union Special as a result of findings of engineers in the field. Write Union Special Machine Co., 407 N. Franklin St., Chicago 10, Ill.

7-12 New Industrial Fiber. Technical bulletin now available on Fortisan-36, new industrial fiber by Celanese. Uses text, charts and diagrams to present technical properties, characteristics and recommendations for processing. Write Textile Sales Department, Celanese Corporation, Charlotte, N. C.

7-13 Textile Instrumentation. New booklet gives details on Brush Lapcheck, Brush Tension Analyzer, Brush Imperfection Counter, and Improved Uniformity Analyzer. Pictures uses and capacities of each machine discussed. Write Brush Electronics Co., 3405 Perkins Avenue, Cleveland 14, Ohio.

7-14 "Vari-Pitch" Sheave Bulletin. Stationary and motion control of "Vari-Pitch" sheaves for speed variation up to 76% by means of pitch diameter adjustment, capacities 1 to 600 HP are described in new bulletin. Write Allis-Chalmers Mfg. Co., Milwaukee 1, Wisconsin.

7-15 Metals, Valves, Fittings. Catalog lists items carried that can be furnished by Tull. Aluminum, brass and copper, monel and nickel, stainless steel, steel and steel tubing; and a complete line of fasteners such as bolts, screws, rivets, etc. Also included is a section on industrial supplies; roofing, solder, babbit, tool steel, valves and welding fittings. A brief technical section gives data on metals and their applications. Write J. M. Tull Metal & Supply Co., Inc., P. O. Box 4628, Atlanta, Ga.

Handy Return Card ▶

- **List Booklets You Want By Number**
- **Request More Information On New Equipment Items**
- **Inquire Further About Advertisements**

TEAR OUT AND MAIL TODAY! NO POSTAGE NECESSARY.

Please be sure to fill in your Firm's Name and your position on the Coupon. This service cannot be extended to you unless this information is furnished.

JULY, 1955

Please send, without obligation, additional information on New Equipment and booklets described (give Key numbers) .....

.....

.....

Please send more information on advertisements (give Page numbers)

.....

.....

Name .....Position .....

Company Name .....

Address .....

City .....State .....

HELPFUL BOOKLETS FREE!

GENERAL, ECONOMICAL MANAGEMENT . . .

1. **"WHERE DID THEY HIT PAY DIRT?"**—Booklet describes how many manufacturing concerns have come South and why they found it profitable. Gives industrial advantages of the Southeast.—CENTRAL OF GEORGIA RAILWAY, Industrial Development Department, 501 Rhodes Haverty Bldg., Atlanta 3, Georgia.

17. **A FAIR DAY'S PAY AND IN RETURN A FAIR DAY'S WORK**—8-page booklet outlining the services offered to industry for the proper utilization of labor, material and equipment, and the resulting advantages for both labor and management.—AMERICAN ASSOCIATED CONSULTANTS, INC., 250 Park Ave., New York, N. Y.

22. **THE WONALANCET WAY**—Is the title of a editorial booklet published five times a year and deals with current problems which appear worthwhile at the time they are written.—WONALANCET COMPANY, 128 Burke St., Nashua, N. H.

PLANT & PLANT MAINTENANCE . . .

100. **MOTION CONTROL WITH SILENTBLOC**—Brochure describes advantages of General Tire Company's Silentbloc method of protecting delicate instruments, reducing machine vibration, etc.—THE GENERAL TIRE CO., Industrial Products Div., Akron, Ohio.

102. **"TANK TALK"**—Sixteen-page booklet of illustrations showing various types of elevated steel tanks constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc., said.—R. D. COLE MANUFACTURING COMPANY, Newnan, Ga.

103. **HUMIDIFICATION, EVAPORATIVE COOLING**—Bulletins available displaying AMCO automatic self-cleaning atomizers, controls and evaporative cooling equipment.—AMERICAN MOISTENING CO., 260 W. Exchange St., Providence, R. I.

105. **CASTERS AND WHEELS** — Catalog gives complete descriptions on full line of industrial casters and wheels. Features patented "LOCKWELD" Steel Casters Without A Kingpin" both Single and Double Ball Race.—THE FAIRBANKS CO., 393 Lafayette St., New York 3, N. Y.

106. **FINNELL COMBINATION SCRUBBER-VAC**—Illustrated literature gives complete specifications and describes various methods of combination-machine-scrubbing, including method recommended for cleaning oily floors.—FINNELL SYSTEMS, INC., 1309 East St., Elkhart, Indiana.

110. **UNBRAKO STANDARDS** — Catalogue by Standard Pressed Steel Co. describes in pictures and text the company's line of Unbrako precision threaded fasteners. Several applications of each product are indicated in line drawings to suggest hundreds of others and to stimulate the imagination of design engineers. — STANDARD PRESSED STEEL CO., Jenkintown, Pa.

111. **CERTIFIED CLIMATE AIRCHANGER SYSTEM**—Bulletin describes Certified Climate Airchanger System as used with direct humidification for partial or complete air conditioning.—PARKS-CRAMER CO., Fitchburg, Mass.

112. **HARDWOOD FLOORING** — Booklet entitled "Specialist in Manufacturing of Hard Maple Flooring for textile plants."—CONNOR LUMBER & LAND COMPANY, P. O. Box 816, Wausau, Wisconsin.

113. **COTTON MILL EQUIPMENT** — This book traces pictorially the steps in processing raw cotton into finished cloth. It shows the equipment needed for all phases of production, as well as containing a "Useful Information" section on Power Factor Correction, Lighting, Circuit Protection, etc.—WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

114. **PENETRATING WOOD FINISH** — Bulletin gives applications, uses and application specifications of floor seals for textiles.—E. I. DU PONT DE NEMOURS & CO., INC., Finishes Division, Wilmington, Delaware.

115. **FOAMGLAS**—Illustrated brochure features information on how the use of Foamglas cellular glass insulation solved the severe insulating problems of leading users.—PITTSBURGH CORNING CORP., One Gateway Center, Pittsburgh 22, Pa.

116. **STOP CORROSION**—Details on speed Rex paint for metal wood and concrete maintenance solving condensation problems.—TRUSCON LABORATORIES, Box 69, Milwaukee Junction, P. O. Dept. T, Detroit 11, Mich.

117. **CLEANING SYSTEMS** — Booklet entitled "Certified Climate and Cleaning Systems" gives latest information on system. Products and uses fully discussed with two story layout of Certified Climate central station air conditioning system.—PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

118. **LIQUIDATION INFORMATION**—Information available on how to profitably dispose of mill properties being liquidated. Tells how Comer will buy, sell and relocate industry in your former site.—COMER MACHINERY CO., 634 W. Peachtree St., Atlanta, Ga.

127. **SOLENOID VALVES**—Bulletin "V" lists sizes from 1/3 inch to 3 inches; valves for normally open or closed service; stainless steel or Jenkins disc seats; three-way solenoid valves, etc.; typical installations.—THE JOHNSON CORP., Three Rivers, Mich.

131. **"AIR PROCESSING"**—Set of three bulletins showing real meaning of the term, where it can be used, the requirements for a successful system, etc.—J. O. ROSS ENGINEERING CORP., 444 Madison Ave., New York 22, N. Y.

135. **COLOR CONDITIONING**—Booklet illustrated in color describes how Du Pont color conditioning puts color to work for you. Many ideas on safety brought out which color can aid.—E. I. DU PONT DE NEMOURS & CO., INC., Finishes Div., Wilmington 98, Delaware.

138. **METAL CONVEYOR BELTS**—Recent catalog describes and illustrates Ashworth's entire range of manufacture, including the new Flat Wire Belt design and application, along with their Woven Wire constructions and Positive Drive Chain Edge belts. — ASHWORTH BROS., INC., Metal Products Div., Fall River, Mass.

146. **FUNCTIONAL GLASS BLOCK DATA** — Folder shows in detail daylighting function of Light-directing and Light-diffusing Functional Glass Blocks. —PITTSBURGH CORNING CORP., 307 4th Ave., Pittsburgh 22, Pa.

150. **RINCO HUMIDIFIERS AND COOLING SYSTEMS**—Bulletin describes new atomizers with construction lessening air consumption in humidifier systems, evaporative cooling systems.—ALDRICH MACHINE WORKS, Greenwood, S. C.

151. **INDUSTRIAL BRUSHES**—Illustrated booklet of industrial brushes featuring textile usage on shears, printing machines—also flock, raising and cylinder brushes.—M. W. JENKINS SONS, INC., 444 Pompton Ave., Cedar Grove, N. J.

153. **LAMINATED TEXTILE PLASTICS**—Booklet by Synthane Corporation shows variety, application, and advantages of laminated plastic parts and supplies for the textile industry.—SYNTHANE CORPORATION, Textile Division, Oaks, Pa.

161. **AUTOMATIC CLEANING EQUIPMENT**—Complete booklet by American MonoRail shows working details and advantages of the Tri-Rail Cleaner, a great improvement over the original unit.—AMERICAN MONORAIL CO., 13107 Athens Ave., Cleveland 7, Ohio.

162. **MODERN METHODS OF TEXTILE FLOOR MAINTENANCE**—Illustrated treatise on the history of floor cleaning in textile plants and a detailed description of new methods for reducing floor cleaning costs as well as preserving textile mill floors.—G. H. TENNANT COMPANY, 2530 N. Second St., Minneapolis 11, Minn.

173. **BLOWERS AND EXHAUSTERS** — Bulletin No. 3014-D describes types "F" and "RE" electric blowers and exhausters. Uses and full description of each with detail drawings.—BUFFALO FORGE CO., 490 Broadway, Buffalo 5, N. Y.

174. **PAINT STRIPPING BOOKLET**—Illustrated booklet providing helpful data on latest materials and methods for simplified stripping of paint. Methods described include: (1) steam gun; (2) hot flow-on; (3) cold spray; and (4) tank immersion.—OAKITE PRODUCTS, INC., 22 Thames St., New York 6, N. Y.

176. **STOKERS AND BOILERROOM EQUIPMENT**—For information on boilerroom problems, improvements and apparatus.—McBURNEY STOKER CO., 2110 Peachtree Rd., Atlanta, Georgia.

181. **AIR FILTRATION**—Bulletin 234 describes and illustrates the Auto-Airmat, which is the automatic dry-type air filter. Principle of operation, performance characteristics, construction and installation fully discussed.—AMERICAN AIR FILTER COMPANY, INC., 275 Central Ave., Louisville 8, Ky.

POWER TRANSMISSION MOTORS, BELTING, LUBRICATION . . .

201. **V-BELT DRIVE CATALOG** — This handy, pocket-sized catalog helps you make quick and easy selections of any Dayton V-Belt Drive from 1 to 1000 HP. Contains many concise, accurate drive tables, diagrams, and other important engineering data.—DAYTON RUBBER CO., Dayton, Ohio.

203. **TREADED LEATHER BELTING**—This 16-page booklet describes Houghton's line of patented, specially treaded leather belting for all types of power transmission. Booklet includes valuable engineering and maintenance section.—E. F. HOUGHTON & CO., Philadelphia, Pa.

207. **TRICO OILER INSTALLATION**—Twelve interesting pages of actual "on the job" photos of Trico oiler applications on nationally recognized machinery and equipment.—TRICO FUSE MFG. CO., 2948 N. 5th St., Milwaukee 12, Wisc.

208. **CUTLER-HAMMER MOTOR CONTROL** — Booklets describe the combination starters for the textile industry, for roving frames and spinning frames, loom switch and Cutler-Hammer Motor Control for textile cards.—CUTLER-HAMMER, 315 N. 12th St., Milwaukee, Wisconsin.

209. **STEEL PULLEYS** — Pictorial review of American Steel Pulleys, their manufacturing processes and some of their end uses. Textile pulleys are featured.—AMERICAN PULLEY CO., 4200 Wissahickon Ave., Philadelphia 29, Pa.

Postage Will Be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

Handy Return Card

USE THIS OPPORTUNITY TO INFORM YOURSELF OF CURRENTLY AVAILABLE LITERATURE DEALING WITH MACHINERY, EQUIPMENT AND SUPPLIES FOR TEXTILE MILLS. FILL OUT THE ATTACHED CARD TODAY.

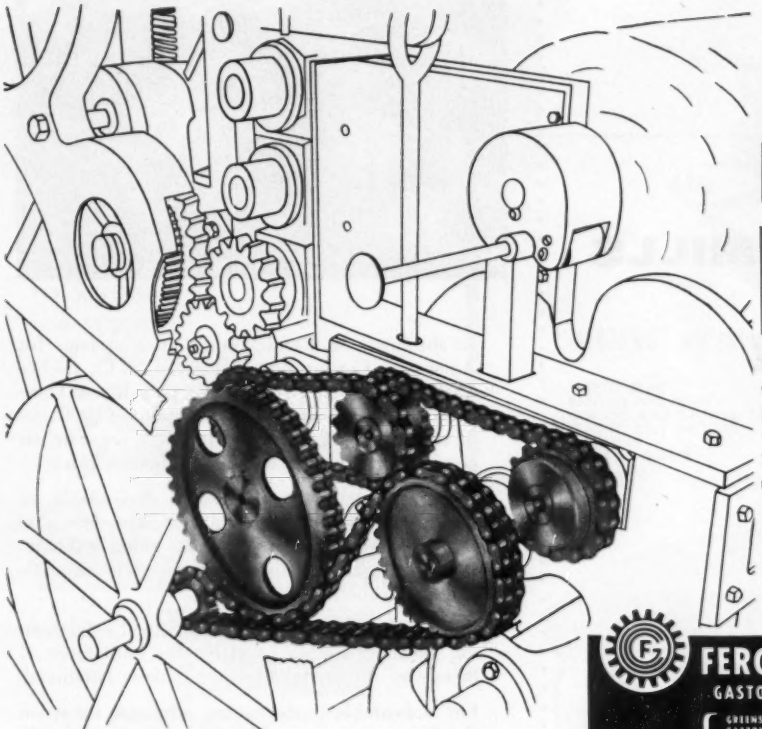
BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 582, SEC. 34.9, P. L. & R., ATLANTA, GA.

TEXTILE INDUSTRIES

806 PEACHTREE ST., N. E.

ATLANTA 5, GA.



CHAIN DRIVES for KITSON PICKERS

BY FERGUSON

Fluted Calender Roll Chain Drives and Driving Shaft Chain Drives especially made for the Kitson Picker.

We make textile and industrial gears for every purpose to your satisfaction.

For information or quotation contact your nearest Sales Engineer or write, without obligation, 529 Airline Avenue.

FERGUSON GEAR COMPANY
GASTONIA, NORTH CAROLINA • TEL. 4-2626

SALES OFFICES

GREENSBORO, N. C.	B. T. GLADDEN	TEL. 7633
GASTONIA, N. C.	B. W. LYNCH TEL. 3-2462	DENVER, N. C.
GREENVILLE, S. C.	F. NEAL HOUSTON	TEL. 5-7939
LA GRANGE, GA	JOHN FERGUSON, TEL. 5040,	P. O. BOX 486

MEMBER AMERICAN GEAR MANUFACTURERS ASSOCIATION

HELPFUL BOOKLETS FREE!

212. GATES TEXTILE ACCESSORIES — Handy pocket-size catalog BHM-7, fully illustrated, gives specifications of Gates textile accessories, including pickers, lug straps, check straps, cone belts, evener belts, harness straps, take-up roll covering, and others. —THE GATES RUBBER COMPANY, 1001 Broadway, Denver 17, Colo.

213. LUBRICATION OF ELECTRIC MOTORS—Illustrated bulletin on lubricating and cleaning ball and roller bearings on electric motors.—NEW YORK & NEW JERSEY LUBRICANT COMPANY, 292 Madison Ave., New York 17, N. Y.

216. LUBRICATION CHART—Wall chart contains lubrication recommendations for many industrial needs. Chart covers applications such as hydraulic systems, spindles, air compressors, reduction gears, electric motors, oven conveyors and other general uses.—LINCOLN ENGINEERING CO., 5701 Natural Bridge Ave., St. Louis, Mo.

217. DYNAMIC RESPONSE D-C MOTORS—Illustrated bulletin describes the new Reliance Super "T" Line D-c. Motors with Dynamic Response. Information is included on speed ranges, acceleration rates, enclosures, dimensions and selection data.—RELIANCE ELECTRIC & ENGINEERING CO., 1088 Ivanhoe Road, Cleveland 10, Ohio.

218. BALL BEARINGS FOR TEXTILE MACHINERY—A 40-page catalog illustrating Fafnir Ball Bearing units for replacement or new applications in all phases of textile processing.—THE FAFNIR BEARING CO., New Britain, Conn.

222. AUTOMATIC PRODUCTION CONTROL — Booklet by Reeves Pulley Company, shows application of many automatic processes and controls to the textile industry. Well illustrated, it contains engineering data quite useful to anyone interested.—REEVES PULLEY COMPANY, Columbus, Indiana.

229. DODGE GENERAL POWER TRANSMISSION MACHINERY — Catalog describes various types of power transmission apparatus by Dodge. Gives specifications, sizes, applications, and prices. Very comprehensive. — DODGE MANUFACTURING CORP., Mishawaka, Indiana.

235. JOHNSON LEDALOYL BEARING BRONZE —Illustrated booklet telling the complete story of Johnson Ledaloyl Bronze, the newest development in self-lubricated bronze for textile bearings and bushings.—JOHNSON BRONZE COMPANY, New Castle, Pa.

237. MOTOR CONTROL—Brochure gives description and engineering data on the Cutler-Hammer Motor Control for roving and spinning frames. Uses listed and advantages discussed.—CUTLER-HAMMER, INC., Milwaukee, Wisc.

238. TEXTILE LEATHERS CATALOG—Catalog by J. E. Rhoads & Sons gives characteristics and advantages of Rhoads "Tannate" leathers. Complete line is listed and described, and tips for correct installation. Copiously illustrated.—J. E. RHOADS & SONS, 2100 W. Eleventh St., Wilmington 99, Del.

253. TEXTILE LUBRICATION—"Lubrication" a magazine published by the Texas Co. is available. Shows methods and means of lubricating chain drives in very comprehensive form.—THE TEXAS CO., 135 East 42nd St., New York 17, N. Y.

256. METERED LUBRICATION—Bulletin 6A has 12 illustrated pages showing how central lubricating systems are applied to combers, roving frames, winders, knitters, looms, etc.—BIJUR LUBRICATING CORP., Rochelle Park, N. J.

265. SERVICE PROCEDURE FOR BALL BEARINGS—A helpful manual for maintenance engineers giving helpful hints on disassembly, inspection, cleaning, lubrication, and replacement of ball bearings in any mechanism.—NEW DEPARTURE, DIVISION OF GENERAL MOTORS CORP., Bristol, Conn.

277. SPECIAL TEXTILE MOTORS — Bulletin 51B6055A describes special features of "Quick-Clean" motors, including discussion on free air flow, prelubricated bearings, rigid cast iron frame and double insulation. — ALLIS-CHALMERS MFG. CO., Milwaukee, Wis.

INSTRUMENTS, STEAM SPECIALTIES . . .

301. JOHNSON ROTARY PRESSURE JOINTS—Bulletin describing the rotary pressure joint which requires no packing, no lubrication and no adjustment, giving installation and maintenance instruction, types, sizes, dimensions and prices.—THE JOHNSON CORP., Three Rivers, Mich.

313. "THE FAIRBANKS VALVE COMPARISON CHART"—New reference manual important in specification, ordering, and using of bronze and iron-body valves.—THE FAIRBANKS COMPANY, 393 Lafayette Street, New York 3, N. Y.

314. MOISTURE CONTENT CONTROL — Bulletin F-3156 giving details of features and benefits of moisture equipment control for slashers and textile applications.—BARBER-COLMAN CO., Rockford, Ill.

321. RED-RAY BURNERS — Bulletin describing use of Red-Ray Burners in preheating and partial drying to increase capacity of frame.—RED-RAY MFG. CO., 445 W. 45th St., New York, N. Y.

324. STROBOTAC—Informative reprint, "Strobotac Boosts Efficiency in Woolen and Synthetic Mills."—GENERAL RADIO CO., Cambridge 39, Mass.

337. COUNTING DEVICES—Catalog of Trumeter's complete line of counters for every application where counting, measuring or registering is required. Colored pictures illustrate each application.—TRUMETER COMPANY, 1265 Broadway, New York 1, N. Y.

339. NEW LUBRICATED PLUG VALVES—Illustrated booklet by The William Powell Co. features a new line of semi-steel and steel lubricated plug valves. Advantages include quick and positive shut off.—THE WILLIAM POWELL COMPANY, 2525 Spring Grove Ave., Cincinnati 22, Ohio.

CARDING, SPINNING, WINDING . . .

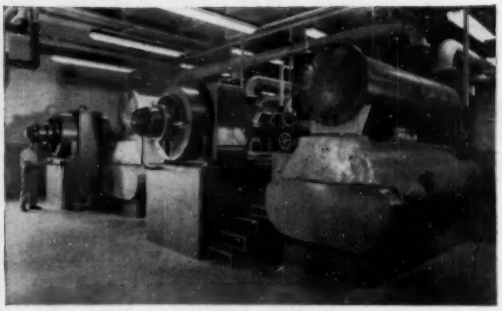
401. LUMMUS DUSTLESS, STEEL BLENDING FEEDERS—Bulletin describing automatically closing, positively locking door on feeders to prevent overloading, choking. — ALDRICH MACHINE WORKS, Greenwood, S. C.

402. AUTOMATIC CLEANING AND OVERHEAD HANDLING FOR TEXTILE MILLS—24-page bulletin describing the American Monorail Automatic Cleaner for preventing accumulation of lint on spinning, twisting, winding and warping machines. Also for cleaning monitors and card room ceilings.—THE AMERICAN MONORAIL CO., Cleveland, Ohio.

403. TRAVELING CLEANERS — 4-page bulletin describes the improved Parks-Cramer Frame and Room Cleaners including the Underframe and Floor Sweepers.—PARKS-CRAMER CO., Fitchburg, Mass.

404. LAPLESS ENDLESS SPINNER—Bulletin and full information will be supplied on lapless endless spinner and coning belting.—TON-TEX CORPORATION, 31 Columbus Ave., Englewood, N. J.

AMEROTRON MILLS REFRIGERATE WITH CARRIER CENTRIFUGALS



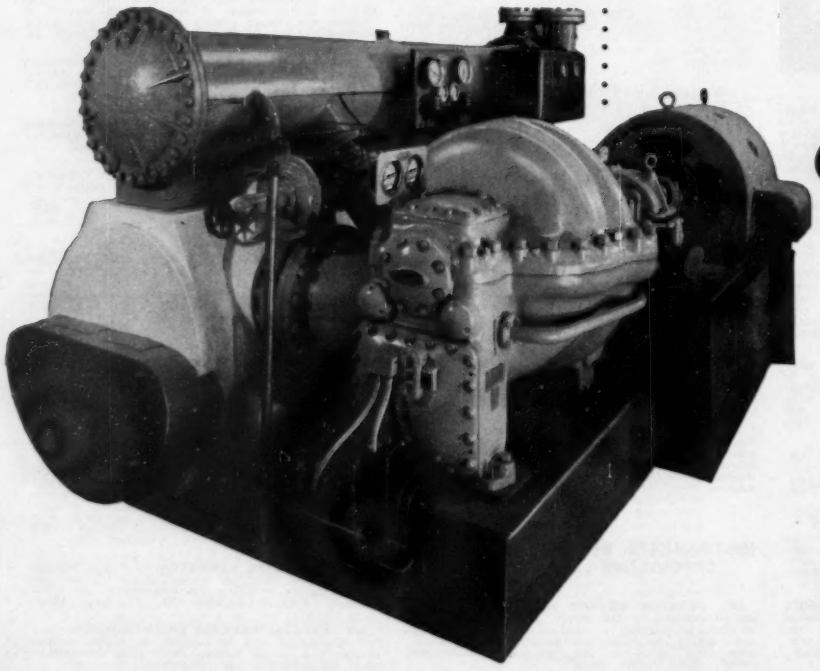
At the heart of the air conditioning systems for Amerotron Corporation at Raeford, N. C., are two Carrier Centrifugal Refrigerating Machines. These two centrifugals—each with a capacity of 1090 tons of cooling—chill the water for nine separate air conditioning systems within the gigantic plant.

Carrier Centrifugals also serve dependably in Amerotron Corporation Mills at Aberdeen and Red Springs, N. C., and in many other mills, including Deering Milliken, Stonecutter, Spindale and Greenwood Mills.

Carrier developed the first centrifugal refrigerating machine in 1922. Carrier has built more of them—by far—than all other makers combined.

For unbeatable performance, why not insist on Carrier centrifugal refrigeration for *your* mill? It can serve dependably as the heart of *any* air conditioning system. Carrier Centrifugals are available in many capacities, from 100 to 4000 tons.

Make use of our experience and assistance. Call your nearest Carrier office. Or write for our free catalog—"Carrier Centrifugal Refrigerating Machines." Carrier Corporation, Syracuse, New York.



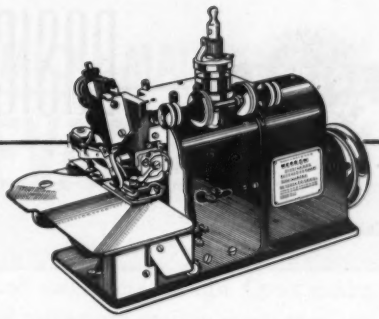
Carrier

air conditioning

refrigeration

industrial heating

MERROW MACHINES
FOR HIGH PRODUCTION



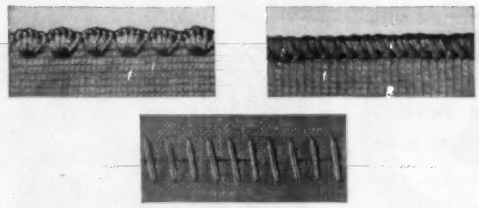
- OVEREDGING
- OVERSEAMING
- HEMMING
- SERGING
- SHELL STITCHING
- BUTT SEAMING
- CROCHET STITCHING
- SHIRRING WITH OVERSEAMING

"MERROWS" are extensively used in the manufacture of:

LADIES' SLIPS
PANTIES AND BRIEFS
CORSETS AND GIRDLES
ELASTIC KNIT ARTICLES
SWEATERS
ATHLETIC SHIRTS
POLO SHIRTS
PAJAMAS

INFANTS' WEAR
WASH CLOTHS
HANDKERCHIEFS
PILLOW CASES
BATHING SUITS
BLANKETS
SILVER CASES
AND NOVELTIES

WORK GLOVES
CHILDREN'S CLOTHES
TROUSERS
LADIES' HOSE
SKI OR LOAFER SOCKS
ANKLETS—ATTACHING TOPS
LAUNDRY AND FRUIT BAGS
PIECE GOODS



We will be glad to demonstrate the work of these machines on your own material.

TRADE MARK REG
The MERROW MACHINE COMPANY
ESTABLISHED 1838 INCORPORATED 1894
2805 LAUREL STREET•HARTFORD•CONN.

HELPFUL BOOKLETS FREE!

408. CARD GRINDING INFORMATION—Outlines care of grinders, instructions on speed to run grinders, amount of oil to add to machine and other pertinent information.—H. S. ROY & SON CO., Worcester, Mass., and Charlotte, N. C.

411. SHEET METAL WORK—Pamphlet describes spinning cylinders, aspirators, card screens, sheet metal specialties.—GASTONIA TEXTILE SHEET METAL WORKS, INC., 222 East Long Avenue, Gastonia, N. C.

412. SERVICE FOLDER — Folder covers textile metal products including spinning and twisting cylinders, card screens, etc.—JENKINS METAL SHOPS, INC., Gastonia, N. C.

413. HIGH SPEED, AUTOMATIC QUILLER—Color booklet by Schlafhorst describes the "Autocoroser" Automatic Quiller. Gives advantages, space requirements, etc.—TERRELL MACHINE CO., INC., Charlotte, N. C.

414. WORSTED SPINNING—Bulletin explaining and illustrating Saco-Lowell's new system for worsted spinning, from top to yarn in five economical and efficient stages.—SACO-LOWELL SHOPS, 60 Batterymarch St., Boston 10, Mass.

415. DOUBLER-TWISTER FOR LARGE PACKAGES—Bulletin describing two new machines producing straight or tapered top bobbins. Suitable for filament or spun yarns up to three pound capacity. Individual thread stop motion fully discussed.—FLETCHER WORKS, INC., Philadelphia, Pa.

416. THE BRIEF SAGA OF THE RING TRAVELER—An interesting history relative to the ring traveler, which is in reality the basis of the spinning frame. John Thorpe's invention of ring traveler, the development of the spindle, and the invention of Rabeth's Bolster type spindle are covered.—NATIONAL RING TRAVELER CO., Pawtucket, R. I.

417. FEATHERTOUCH DRAFTING—Booklet describes in detail with pictures the most uniform drawing, the strongest drawing with the highest production per frame at the lowest cost.—IDEAL INDUSTRIES, INC., Bessemer City, N. C.

419. TEXTILE APRONS—Illustrated folder showing the steps in manufacture of genuine leather aprons for all types of long draft spinning and card room machinery.—TEXTILE APRON COMPANY, East Point, Ga.

421. CARD ROLL COVERS—Brochure describing the Davis Seamless Roll Covers. Lists advantages, specifications and offers free trial.—THE TEXTILE LABORATORIES, P. O. Box 1003, Gastonia, N. C.

422. WARPER BEAMS—Folder describes the high speed for rayon tire cord, cotton warper beams, cast aluminum end supports and large diameter heads.—U. S. BOBBIN & SHUTTLE CO., Lawrence, Mass.

423. SPINDLE OILING MACHINE — Information available on new Spindle Oiling Machine. Features include filter system to clean oil for reuse; smaller size for narrow aisles.—WICACO MACHINE CORP., 4800 Stenton Ave., Wayne Junction, Philadelphia 44, Pa.

424. GREASE-SEALED, ANTI-FRICTION ROLLS—Booklet contains description and engineering drawings of the Cole grease-sealed anti-friction rolls. Also contains information on dual apron controlled drafting units.—COLE ENGINEERING CORP., P. O. Box 153, Columbus, Ga.

425. HANDY REFERENCE TABLES — Folder showing spinning traveler speeds, sizes of ring flanges, etc.—VICTOR RING TRAVELER CO., Providence, R. I., and Gastonia, N. C.

426. UNIRAIL UPTWISTER — Bulletin describes Universal Winding's headless package or bobbin take-up Unirail Uptwister which gives you higher yarn quality and better packages at faster speeds and lower costs, according to the bulletin. Well illustrated with advantages discussed. — UNIVERSAL WINDING COMPANY, P. O. Box 1605, Providence, R. I.

427. PNEUMACARD — Booklet describes this Pneumafil system for wool cards giving features and how it operates complete with illustrations.—PNEUMAFIL CORPORATION, 2516 Wilkinson Blvd., Charlotte 8, N. C.

432. PRECISION TEXTILE WINDING—Bulletin on Kidde Tensions and Density Control for winding rubber cones.—WALTER KIDDE & CO., INC., Belleville, N. J.

435. DOUBLE DECK TWISTERS—Bulletin describes Jumbo (8 oz. to 16 oz. headless or take-up spool packages) and Acme (up to 10 oz. packages) models for high speed twisting of silk, rayon, nylon, etc., to finest deniers.—U. S. TEXTILE MACHINE CO., Scranton 8, Pa.

436. MAINTENANCE INFORMATION FOR YOUR SCOTT TESTER — Booklet containing maintenance data for calibration of Scott Testers, clamps for testers, gear-box lubrication and recording.—SCOTT TESTERS, INC., Providence, R. I.

438. HEADLESS PACKAGE TWISTER ELIMINATES REDRAWING—Literature shows high-speed Face Drive Twister for accurately building tapered or straight-end headless packages which go direct to quilling or warping without redrawing.—U. S. TEXTILE MACHINE CO., Scranton 8, Pa.

445. ROLLER BEARING SPINDLES—Illustrated booklet showing various types of Marquette Roller Bearing Spindles. The unique full-floating footstep bearing is pictured in cut-away views, and its advantages are described.—THE MARQUETTE METAL PRODUCTS CO., 1145 Galewood Ave., Cleveland, Ohio.

447. CONE WINDER—Form A95 describes the Foster Model 102 winder which produces the Foster knitting cone for spun yarns, warping cones and tubes for dyeing and twister supply.—FOSTER MACHINE COMPANY, Westfield, Mass.

453. EVENNESS TESTER—Folder explaining how this Tester takes the guess out of quality control and each processing step from carding through spinning.—USTER CORPORATION, Charlotte, N. C.

458. CONICAL RINGS AND FLYERS — Special data available on the Herr conical rings and flyers.—HERR MANUFACTURING CO., INC., 318 Franklin St., Buffalo 2, N. Y.

459. TENSION CONTROLS — Folder describing tension compensation and automatic tension controls. Three models—Standard, Warp, and Double Disc fully described with specific application.—WALTER KIDDE & CO., INC., Belleville 9, N. Y.

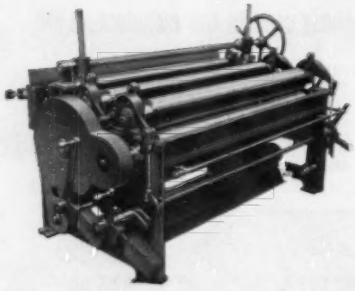
461. PRECISE WIND MACHINE—Form A-92 describes the Foster Model 75 widely used for winding straight or pineapple cones and tubes of rayon, nylon and other filament yarns.—FOSTER MACHINE COMPANY. Westfield, Mass.

462. TEXTILE MACHINERY PARTS CATALOG—A 24-page illustrated catalog describing the complete line of Dayco and Thorobred textile machinery parts including Cots, Aprons, Loop Pickers, Lug Straps, etc.—DAYTON RUBBER CO., Dayton, Ohio.

BASIC FACTS— *about size boxes*

Save This for your Files

Cocker Machine & Foundry Co.
Gastonia, North Carolina



A size box has only two functions 1. To thoroughly impregnate the yarn so that the warp will handle right and 2. To remove all surplus sizing to prevent shedding and gumming up in subsequent operations. Both must be performed with the greatest possible efficiency and economy. Following are the reasons why Cocker Size Boxes—backed by over 50 years of practical experience—give superior performance.

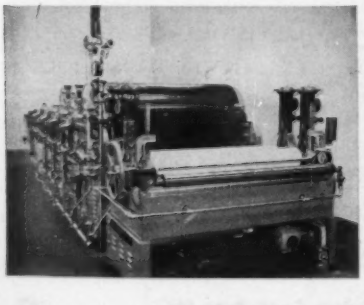
Thorough Impregnation

Greater Capacity

Minimizes minor fluctuations in consistence and permits ample working space. Remember, size *consumption* is the same whether the box is large or small.

Accurate Level and Temperature Control

All Cocker Size Boxes—cotton or synthetic—are steam jacketed with open coils, and inject steam at *4* points, thus preventing the hot spots which may develop where only one steam feed is used. Both temperature and size level are accurately and automatically controlled.

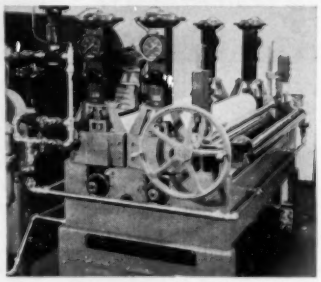


Adequate Pressure and Roll Surface

Bottom Quetsch Rolls are 9" solid ¾" shell stainless steel—not plated cast iron. Large diameter top rolls combine to give ample dressing surface at high speeds. Large diameter ball-bearing journals permit pressure applications which are impossible with lighter construction. We sincerely believe that the Cocker Size Box is the only one rugged enough to function properly on cottons and spuns at high speed, and to provide the constant and high pressure required on filament yarns.

Surplus Size Removal

Here again the large rolls, heavy journals, and rugged construction do a superior job, especially at high speeds.

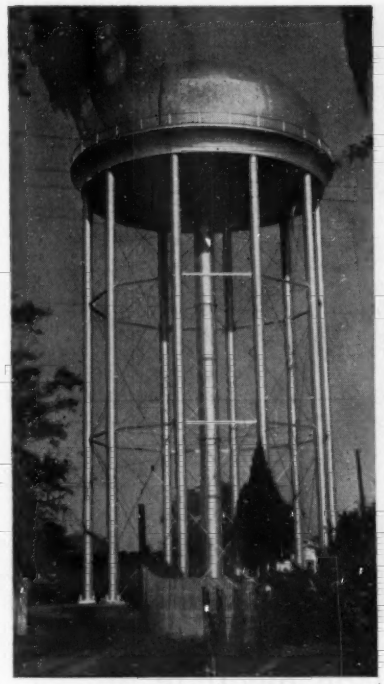


On Economy

Cocker engineers have consistently avoided expensive innovations of questionable value and have concentrated on rugged construction which assures smooth running and low maintenance. Unitized construction of extra heavy sealed size box bearings with packless seals, and complete accessibility of all parts reduces maintenance to a minimum. And there are no extras to buy. Controls, counters, valves, piping, push button stations, perforated steel boil - out pipes, etc. are standard equipment.

One Cocker Size Box will do a perfect job on *any* fibre at *any* speed, and *at the lowest possible cost.* Write for full information.

Agents in New England and Canada:
J. S. Fallow Co., 279 Union St.,
New Bedford, Mass.—offices in Montreal



Established in 1854

Cole engineers have the background of a century of experience in tank design.

FOR ECONOMICAL MAINTENANCE

COLE ELEVATED TANKS

Design plays an important part in tank maintenance. Experienced engineers design COLE tanks for easy access and minimum maintenance costs, as well as for permanence, safety and dependability.

Send us your inquiries for tanks 5,000 to 2,000,000 gallons—stating capacity, height to bottom, and location. Write for latest COLE catalog—*Tank Talk.*

R. D. COLE

- TANKS
- TOWERS
- CYLINDERS
- VESSELS
- STANDPIPES

Manufacturing Co., Newnan, Ga.

HELPFUL BOOKLETS FREE!

467. CARD CLOTHING—8-page booklet by Benjamin Booth Company describes Strip-O-Matic Card Clothing and its advantages.—BENJAMIN BOOTH COMPANY, Allegheny Avenue & Janney Streets, Philadelphia, Pennsylvania.

469. SHORT CUT TO STAPLE FIBER SPINNING—Color brochure shows the ten steps in operation of the Turbo Tow Stapler, gives technical details and diagrams.—TURBO MACHINE COMPANY, Lansdale, Pa.

471. FACTS ABOUT YOUR FLYERS AND SPINDLES—Booklet by Ideal Machine Shops shows how smooth Flyer and Spindle operation can help produce higher and more efficient output, good quality yarn, minimum wear, and larger bobbins.—IDEAL MACHINE SHOPS, Bessemer City, North Carolina.

472. TWISTING MACHINERY — Bulletin gives outstanding features, specifications facts and useful information on Novelty Yarn Twisters for Cotton, Silk, Worsted and Rayon Yarns.—COLLINS BROTHERS MACHINE COMPANY, 647 Roosevelt Ave., Pawtucket, Rhode Island.

474. BALL BEARING COMB BOXES — Southern States Equipment Corp. offers literature on their famous C-1 Ball Bearing Comb Boxes. Description, working principle, cut-away views shown.—SOUTHERN STATES EQUIPMENT CORP., Hampton, Ga.

475. TEXTILE ROLL COVERINGS AND MILL SUPPLIES—Color booklet by Armstrong shows and describes their complete line of textile roll coverings, including also loom supplies, mill supplies, roll covering for cotton, silk and synthetic and woolen and worsted systems. An excellent guide book.—ARMSTRONG CORK CO., Industrial Div., Lancaster, Pa.

476. TEXTILE FIBER OPENER FOR COTTON, SYNTHETICS, WOOL—New brochure by Cen-Tennial Cotton Gin Co., gives complete data on the Cen-Tennial Opener which incorporates improvements on the original SRRL Opener. Complete operating procedure is described.—CEN-TENNIAL COTTON GIN CO., Columbus, Ga.

478. TIPS ON CARDING PROCEDURE—Monthly bulletin by Ashworth Brothers includes many useful tips and advice on carding operation, maintenance and care and is available to anyone interested. Bulletin is a reprint of section appearing on green paper in this issue.—ASHWORTH BROTHERS, Fall River, Mass.

WEAVING, SLASHING . . .

501. LOOMS—An accordion type folder is available entitled "Unfolding to You the World's Largest Line of Looms." Information on all types fully discussed. —CROMPTON & KNOWLES LOOM WORKS, Worcester 1, Mass.

502. COUNTING AND MEASURING DEVICES—Condensed textile catalog illustrating and describing pick counters, hank counters, cut meters, measuring counters. Wide range of counting devices for production recording on all types of textile machinery.—VEEDER-ROOT, INC., Hartford, Conn.

503. WEAVER'S KNOTTER—A catalog on the Boyce Weaver's Knotter giving a few instructions as to its use, recommendation as to the proper type knotter for the various types of yarns, and the spare parts that go to make up the knotter.—A. B. CARTER, INC., Gastonia, N. C.

504. LOOM SUPPLIES—Literature describing complete line of straps, strapping, pickers, dobby cords, sticks, binders, bumpers, brake lining and allied products.—E. H. JACOBS NORTHERN DIV., THE BULLARD CLARK CO., Danielson, Conn.

505. INNOVATION IN TEXTILE DRYING—Booklet by J. O. Ross gives details on Steam or Gas "Hot Air" Slasher for high speeds at low cost.—J. O. ROSS ENGINEERING CORP., 444 Madison Ave., New York 22, N. Y.

506. SLASHING HINTS—A 20-page booklet offering helpful hints on warp sizing. Subjects: Size cooking equipment, section beam tension, sizing selvages, cooking, use of split rods, weighing for the mix, tips on cooking equipment, storage in kettles, etc.—SEYDEL-WOOLLEY & CO., 748 Rice St., N.W., Atlanta, Ga.

508. LOOM PRODUCTION CHARTS — Convenient celluloid card showing yards per loom per week of 40 hours at various loom speeds.—RALPH E. LOPER CO., Greenville, S. C.

511. ALUMINUM BEAMS—Catalog No. 1-21 describes Hayes magnesium and aluminum specialties for the textile industry. Illustrates this company's beams that are one-third the weight of conventional types.—HAYES INDUSTRIES, INC., Jackson, Mich.

514. THE STORY OF STARCHES—Semi-technical booklet tells the story of starches and information on how they are produced, the creation of new specialty starches, the unique "man-made" starch derivatives, and the handling of starches.—NATIONAL STARCH PRODUCTS, INC., 270 Madison Avenue, New York 16, New York.

515. WARPING, SLASHING, WEAVING ARNEL YARNS—8-page booklet preliminary information on Arnel Triacetate Yarns.—CELANESE CORP. OF AMERICA, Textile Division, Box 1414, Charlotte, N. C.

517. LOADING SYSTEM—Bulletin 417, on pneumatic loading system for Saco-Lowell slasher size box squeeze rolls, contains installation photo, features, specifications, and prices.—THE FOXBORO COMPANY, Foxboro, Mass.

521. STEEL WARP BEAMS—20-page Catalog No. 45 illustrating Standard and Special Purpose Warp Beams for the weaving industry, both broadloom and narrow fabrics. Also Textile Machinery Specialties.—MILTON MACHINE WORKS, INC., Milton, Pa.

530. ROTARY UNIONS—New catalog shows how to cut costs, get better sealing on can dryers, slashers, calenders, etc. Catalog No. 500 entitled "Where Good Connections Count."—PERFECTING SERVICE COMPANY, Atando Ave., Charlotte, N. C.

536. HOMOGENIZER IMPROVES SLASHING—Pamphlet by Manton-Gaulin Manufacturing Company shows how mechanical conversion of size by the Gaulin method produces better size. Gives installation pictures and specifications. — MANTON-GAULIN MANUFACTURING COMPANY, INC., Everett, Mass.

537. WEST POINT'S HOT AIR SLASHER—Bulletin describes advantages and capacities of new hot air slasher by West Point Foundry and Machine Works. Detailed specification included.—WEST POINT FOUNDRY AND MACHINE WORKS, West Point, Georgia.

538. AIR SLASHER DRYER — Pamphlet by Proctor & Schwartz shows construction and operating details of the Proctor Air Slasher Dryer. Advantages listed and cut-away view shown.—PROCTOR & SCHWARTZ, INC., 7th St. and Tabor Rd., Philadelphia 20, Pa.

"With our wide diversity of interests we count on Business Publications"

says

Harry A. Bullis

Chairman of the Board, General Mills, Inc.

"... to help us keep closely informed on problems ranging from the wheat field to the consumer's dining table or the industrial plant."

Without business publications, it would be a near-impossibility to keep closely informed on new developments in the many fields that affect day-to-day operations in a large, highly-diversified firm. That's why Mr. Bullis, his associates and department heads throughout his organization "count on" the timely, factual reporting of business publication editors, analysts and feature writers.

When the reader feels the editorial pages are informative and helpful to him, you can be sure he'll be impressed by your message on an advertising page, too. For advertising pages in business publications have equally specialized value. They provide a direct sales route for any product or service of benefit to business or professional men.

NBP

NATIONAL BUSINESS PUBLICATIONS, INC. *1001 Fifteenth Street, N. W., Washington 5, D. C. • STerling 3-7535*

The national association of publishers of 173 technical, professional, scientific, industrial, merchandising and marketing magazines, having a combined circulation of 4,098,937 . . . audited by either the Audit Bureau of Circulations or Business Publications Audit of Circulation, Inc. . . . serving and promoting the Business Press of America . . . bringing thousands of pages of specialized know-how and advertising to the men who make decisions in the businesses, industries, sciences and professions . . . pin-pointing the market of your choice.

Write for list of NBP publications and the latest "Here's How" booklet, "How Well Will We Have to Sell Tomorrow?", by Ralston B. Reid, Advertising & Sales Promotion Manager, Apparatus Sales Division, General Electric Company, Schenectady, N. Y.

HELPFUL BOOKLETS FREE!

540. SLASHING EQUIPMENT—Brochure by Tower Iron Works shows different types of slashing equipment, enumerating characteristics and advantages of each.—TOWER IRON WORKS, 50 Borden St., Providence 3, R. I.

545. NOPCO CHEMICAL DATA SHEETS—Now available are Nopcostats, Nopco Sizes N and D, Important points in Warp Sizing, Interpretation of Analysis, Wetting Agents, Balanced wool and worsted oils, Acetate Warp Sizing, Viscose warp sizing, Rayon soaking.—NOPCO CHEMICAL CO., Harrison, N. J.

627. SINGLE APRON STOCK DRYERS—Folder presenting the latest idea in automatic drying which every mill having drying problems can profitably use to meet modern manufacturing conditions.—C. G. SARGENT'S SONS CORP., Graniteville, Mass.

628. TREATMENT OF SYNTHETIC TEXTILE FINISHES—High speed drying and curing of synthetic finishes by means of far-infrared radiation is covered in a new 22 page folder entitled "The Textile Report." — EDWIN L. WIEGAND COMPANY, 7700 Thomas Blvd., Pittsburgh 8, Pa.

630. COMPLETE NAPTHOL MANUAL—Practical working handbook, 110 pages, on textile dyeing and printing applications of Naphtols. Write on company letterhead.—PFISTER CHEMICAL WORKS, Box 326, Ridgefield, N. J.

631. ELIMINATE DYE-BATH SHOCK — Data sheet by Foxboro shows how woven fabrics and hosiery may be protected from Crow's-feet, uneven shade, creasing caused by too rapid cooling of goods.—FOXBORO COMPANY, 487 Neponset Ave., Foxboro, Mass.

632. LUG STRAP WASHERS—Series 1-C illustrated bulletin detailing right and wrong application and use of washers.—E. H. JACOBS NORTHERN DIV., Danielson, Conn.

637. BALL BEARING TURN TABLE—Leaflet describing this 48" diameter steel turn table for use in mills where the cloth is delivered in rope form to trucks and the trucks are placed in position ahead of a Scutcher or cloth opening machine. Advantages discussed.—BIRCH BROTHERS, INC., 32 Kent St., Somerville, Mass.

639. ROTARY DYEING MACHINE—Booklet No. 425 illustrating the features of these stainless steel machines used for dyeing hosiery, hats, gloves, socks, etc.—SMITH, DRUM & CO., Allegheny Ave. at 5th St., Philadelphia 33, Pa.

653. GUIDERS AND TENSION DEVICES—Illustrated and described are the Mount Hope Precision Guiders and open width Tension Devices used for accurate, straight line guiding of open width goods. Bulletin SG-PG.—MOUNT HOPE MACHINERY CO., 15 Fifth St., Taunton, Mass.

DYEING, FINISHING CLOTH ROOM . . .

601. CONTINUOUS PEROXIDE BLEACHING RANGES—Booklet gives illustrations and describes uses and gives specification of Ranges.—RODNEY HUNT MACHINE CO., 49 Mill St., Orange, Mass.

602. CONTROLLED VAT DYEING—Calco technical booklet No. 828 discusses stabilization of Vat Dyes at Elevated Temperatures, Instrumental and Analytical Measurements, Lenco Potentials.—AMERICAN CYANAMID CO., Calco Chemical Division, Bound Brook, N. J.

603. EMCO ROTARY CUTTER WINDER—Bulletin gives applications, sizes and exclusive features.—H. W. BUTTERWORTH & SONS CO., Bethayres, Pa.

606. HYDRAULIC POWER UNITS—Literature describing hydraulic unit, motor, pump, reservoir, valving a small compact unit for operating of hydraulic calenders, presses, hydraulic controls, etc.—B. F. PERKINS & SON, INC., Holyoke, Mass.

608. WASHERS FOR SCOURING, BLEACHING, ACIDIFYING—Well-illustrated booklet shows how Sargent's modern, high-capacity, continuous process washers can help maintain quality and decrease costs. Contains operation diagram and good commentary on construction.—C. G. SARGENT'S SONS CORPORATION, Graniteville, Mass.

610. PROCTOR DRYING MACHINERY FOR THE TEXTILE INDUSTRY—Illustrated, descriptive catalog on all types of dryers for raw stock, warps, package dyed and automatic skein yarn. Also includes preboarding and automatic boarding machines for hosiery.—PROCTOR & SCHWARTZ, INC., 7th and Tabor Rd., Philadelphia, Pa.

611. LOW COST DYEING—Bulletin by Blickman describes their fully enclosed, stainless steel Dyebox. Reports increased production per man hour and more runs per day at lower cost. Write for bulletin 7034.—S. BLICKMAN, INC., Gregory Ave., Weehawken, N. J.

614. TEXTILE FINISHING MACHINERY—Further information concerning the Wiesner-Rapp textile finishing machinery as connected with the Textile and Chemical Industries. Helpful in discussing processing problems.—THE WIESNER-RAPP CO., INC., 1603 Seneca St., Buffalo 10, N. Y.

615. HIGH PRODUCTION EXTRACTOR FOR RAW STOCK—YARN—HOSIERY—Descriptive bulletin and full information on automatic Twintainer Extractor with bottom-unloading removable baskets. Machine replaces three conventional extractors, lowers labor costs.—FLETCHER WORKS, INC., Philadelphia, Pa.

617. AUTOMATIC CONTROL SYSTEM FOR CONTINUOUS BLEACHING—Illustrated folder describes the new method of controlling the temperature, pressure, and liquid level in the continuous bleach operation. — TAYLOR INSTRUMENT COMPANIES, Rochester 1, N. Y.

619. PENFORD FINISHING GUMS—Booklet by Penick & Ford gives complete data, including physical properties and results which may be expected on Penford gums.—PENICK & FORD, LTD., 420 Lexington Ave., New York 17, N. Y.

620. REGENERATION OF ZEOLITE WATER SOFTENERS—Booklet explains advantages of International's Lixate Process in regeneration of zeolite water softeners. Shows how it cuts costs and does a better job.—INTERNATIONAL SALT COMPANY, INC., Scranton, Pa.

621. DYEING SYNTHETIC FIBERS — Brochure giving a comprehensive, detailed analysis of the methods and materials available for dyeing synthetic fibers.—GENERAL DYESTUFF CO., 435 Hudson St., New York 14, N. Y.

623. SELVAGE GUIDER—The Marshall and Williams positive overfeed and selvage guider is described in a brochure as being developed to meet the most modern requirements of the textile finishing industry. Full description, pictures and advantages discussed.—MARSHALL AND WILLIAMS CORPORATION, 46 Baker Street, Providence 5, R. I.

DON'T BE AN OTSPAR!

An OTSPAR is an Over-The-Shoulder-Pass-Along-Reader. He is found in nearly every textile mill and can be very annoying, even though his intentions are good.

Get your *own* copy of TEXTILE INDUSTRIES and avoid being jammed in the teeth by a suddenly raised shoulder.

It only costs $3.00 for two years and can help you run your job a *lot* better! Mail this handy coupon today!

W. R. C. Smith Publishing Co.
Dept. T-4B
806 Peachtree St., N. E.
Atlanta 5, Georgia

Please enter / renew my subscription to TEXTILE INDUSTRIES for two years.

Name _____ Title _____

Address _____

City _____ State _____

Company Name _____

☐ **Enclosed find $3.00** ☐ **Bill me for $3.00**

LARGE PACKAGES HAVE ADVANTAGES IN THE STEPS THAT FOLLOW SPINNING

The new Type "D" Barber-Colman cheese holds 6½ lbs., which is 120,000 yards of 24s yarn, or 2½ times as much as the standard Type "C" cheese. This gives more slasher beams per cheese, even in the 40"-head size, and thus more loom beams per set. *This increase in loom beams per set, and the consequent reduction in creelings per week, can provide substantial cost reductions in many mills.* Similar advantages are available in the twisting.

The new Barber-Colman Type "DW" Warper shown above will wind slasher beams as large as 40" head. It has all the features of the familiar Type "VW", plus several new ones such as a pivoted comb support which moves the comb forward as the beam fills. The driving drum, clutch, brake, and motor — all of which are larger and more rugged to handle the heavier loads — are now arranged back of, rather than beneath, the beam. The creel shown is not the new Type "DC" Creel but is the standard Type "VC", as the new Warper can be used with either the large *or* the standard package. *For further details, please write for descriptive literature, or ask your Barber-Colman representative.*

USE BARBER-COLMAN INSPECTION AND SERVICE

For *all* your Barber-Colman machines, be sure to call on the Service Department of your nearest Barber-Colman office. The men who staff this organization are specially trained and equipped, with a wealth of experience in checking, maintaining, repairing, and modernizing all types and models of Barber-Colman equipment. They are backed by alert main and branch offices who see that they are supplied with complete and reliable parts and information.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U.S.A. MANCHESTER, ENGLAND MUNICH, GERMANY

INDIA	MEXICO	BRAZIL	JAPAN	PAKISTAN	PAKISTAN
Batliboi & Company Forbes Street, Fort Bombay, India	J. Rabasa Isabel la Catolica 45-913 Apartado 7348 Mexico D.F., Mexico	Quimanil S.A. Aminhas e Representacoes Rua Glicerio 537, 547 Caixa 5658 e 3431 Sao Paulo, Brazil	Do-Yei Shoji Kabushiki Kaisha No. 7 Awajimchi 1-Chome Higashi-ku Osaka, Japan	Associated Agencies (M'cr.) Ltd. Piccadilly House 11 Piccadilly Manchester 1, England	Associated Agencies (M'cr.) Ltd. 27 Kotharı Building Napier Road Karachi 2, Pakistan

HELPFUL BOOKLETS FREE!

658. BEAM MULTIPLE DYEING—Information on the Morton System Horizontal Beam Dyeing machine is available. Features include minimum handling of beams and the use of a common or individual dye-bath for as many as six beams.—MORTON MACHINE WORKS, 1718 Third Avenue, Columbus, Ga.

DYESTUFFS, CHEMICALS, SOAPS . . .

701. MAGNESIUM APPLICATIONS—Case history information on magnesium application in the textile field, published bi-monthly with latest developments in the magnesium industry.—DOW CHEMICAL CO., Midland, Mich.

704. FUNDAMENTALS OF INDUSTRIAL WATER TREATMENT PROCESSES—24-page booklet entitled "If You Use Water" discusses the fundamentals of the three major classifications of industrial water treatment based on ion exchange: softening, dealkalization, and deionization.—ROHM & HAAS COMPANY, Resinous Products Div., Washington Square, Philadelphia 5, Pa.

705. THEORETICAL AND APPLIED SILK-SOAKING—Attractive 23-page booklet outlining methods of silk-soaking and outlining investigation on the soaking, back-winding and degumming of silk.—HART PRODUCTS CORP., 1440 Broadway, New York 18, N. Y.

710. DEPUMA—An odorless, viscous, non-evaporating emulsion which is highly efficient as an anti-foam, useful in all phases of dyeing and printing.—AMERICAN ANILINE PRODUCTS, INC., 50 Union Square, New York, N. Y.

712. CATALYST AC-6 — Booklet describes how Catalyst AC-6 steps up curing efficiency as much as 25 per cent. Free eight-ounce bottle upon request. — MONSANTO CHEMICAL COMPANY, Plastic Division, Dept. TI-3, Springfield 2, Mass.

713. LIOVATINE ED—Vat dyeing assistant increasing penetration and level dyeings with maximum yield of color.—SANDOZ CHEMICAL WORKS, 61 Van Dam St., New York City.

714. NEW SODA ASH BULLETIN—64-page edition contains both new material and revisions of previously used data covering the subject.—SOLVAY SALES DIV., 40 Rector St., New York 6, N. Y.

715. AQUAROL AND ARKANSAS PRODUCTS—Bulletin on Aquarol water repellent finish with method of preparing bath; also on other Arkansas products for cotton, wool, silk and yarn, hosiery processing.—ARKANSAS CO., INC., Newark, N. J.

719. WOOL OIL—Descriptive booklet on anti-static fiber lubricant, Twitchell 7421. Performance factors given particular emphasis are static control, scourability, lubricity and resistance to yellowing.—EMERY INDUSTRIES, INC., Dept. 5, Carew Tower, Cincinnati 2, Ohio.

720. INDUSTRIAL OIL—Bulletin catalogs all of Swift's Industrial Oil and Fatty Acid products. Included are detailed specifications, shipping information and suggested usage on products of animal, vegetable and marine sources.—SWIFT & COMPANY, Industrial Oil Department, 1800 165th Street, Hammond, Indiana.

721. SURFAX 1288—Product data sheet explains this useful wetting and rewetting agent. Described as being water soluble at all temperatures and is a highly concentrated, economical surface active agent. —E. F. HOUGHTON & CO., 303 W. Lehigh Ave., Philadelphia, Pa.

722. RESINS & LATICES — Booklet describes chemigum, latex, pliolite latex, plivola latex, pliovic AO and their applications. Gives properties of Goodyear Latices.—GOODYEAR CHEMICAL DIV., 1144 East Market St., Akron 16, Ohio.

723. CHEMICAL CATALOG—Features detergents, wetting agents, emulsifiers, brighteners, sequestrants, dyeing assistants with chemical composition, properties and application.—ANTARA CHEMICALS DIV., General Aniline & Film Corp., 435 Hudson St., New York 14, N. Y.

727. COLOR PRINCIPLES—Booklet available from Sandoz Chemical describes the fundamental principles of color and its measurement. Booklet has been adopted by several of the leading textile schools.—SANDOZ CHEMICAL WORKS, INC., 61 Van Dam Street, New York 13, N. Y.

729. STATIC AND STATIC CONTROL—Papers deal with historical background of static electricity and the problems caused by it along with methods of controlling them.—DEXTER CHEMICAL CORP., 819 Edgewater Road, New York 59 N. Y.

733. WOOL OILS—Twin booklets by Procter and Gamble tell of the influence of wool oils in producing quality yarns and fabrics, and of Procter and Gamble's Proxol T, an outstanding wool oil.—PROCTER & GAMBLE DIST. CO., Cincinnati, Ohio.

734. BLEACHING WITH PEROXYGEN CHEMICALS—Bleaching methods for cotton, rayon, nylon and animal fibers are comprehensively treated in Becco Research and Development Dept., Bulletin No. 52 now available.—BUFFALO ELECTRO-CHEMICAL CO., INC., Station B, Buffalo 7, New York.

745. RAPIDASE FOR DESIZING—Bulletin explaining in detail the properties and characteristics of Rapidase.—WALLERSTEIN CO., INC., 180 Madison Avenue, New York 16, N. Y.

748. INDUSTRIAL CHEMICALS—24-page booklet listing alphabetically Harshaw industrial chemicals and applications.—THE HARSHAW CHEMICAL COMPANY, 1945 East 97th Street, Cleveland, Ohio.

749. WATER SOLUBLE GUMS — Booklet giving the origin, gathering, marketing and uses of water soluble gums. This booklet No. 23 is beautifully illustrated, and is one of the few treatises on the subject. —JACQUES WOLF & CO., Passaic, N. J.

753. TRITON X-100—Booklet available describing this highly concentrated detergent and wetting agent. Main uses fully discussed and chemical properties brought out.—ROHM & HAAS COMPANY, Philadelphia 5, Pa.

757. THE CHEMISTRY OF CYNANURIC CHLORIDE—Very comprehensive technical text by American Cyanamid Co. Gives physical properties, reaction chart, chemical properties, potential applications, toxicity, table of alcohol reactions, table of amine and related compound reactions. — AMERICAN CYANAMID CO., 30 Rockefeller Plaza, New York 20, New York.

766. DU PONT PEROXIDE BLEACHING SYSTEMS—New book illustrating and describing this continuous peroxide bleach system. Layouts and other information included.—E. I. DU PONT DE NEMOURS & CO., ELECTROCHEMICAL DEPT., Wilmington, Del.

A NEW FLOROSEAL

. . . for IMPROVED mill floor maintenance

Through continued research for better products, Selig now offers the textile industry FLOROSEAL LUMX. New FLOROSEAL LUMX has all the fine qualities of regular FLOROSEAL . . . it can be applied easily and dries in one or two hours . . . daily cleaning with buffing mop is speedy and leaves the floor with a sparkling lustre. FLOROSEAL LUMX is *absolutely guaranteed not to darken with age . . . regardless of the number of coats applied!*

For either wood or cement floors, FLOROSEAL LUMX is the last word in a superior seal that keeps out dirt, moisture, grease and oil . . . AND RETAINS THE NATURAL BEAUTY OF THE FLOOR.

THE SELIG COMPANY

Manufacturing Chemists Since 1896

ATLANTA DALLAS HOUSTON NEW ORLEANS

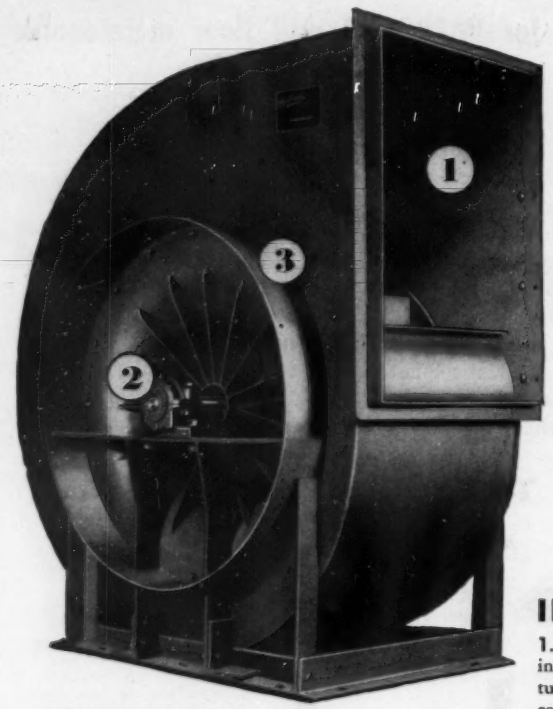
QUALITY HYGIENIC SELIG SANITARY PERFECTION

American Thread Company has been a satisfied user of Selig products for many years. Pictured below is one of the beautifully maintained mill floors at the Dalton, Georgia plant.

HERE'S THE BUILT-IN QUALITY YOU GET IN THIS "Buffalo" FAN

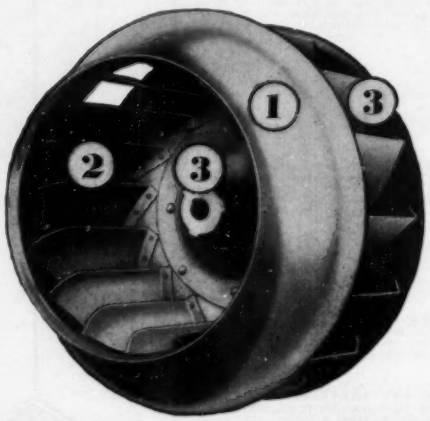
In October of 1953, when we introduced the "Buffalo" Type BL Limit-Load Ventilating Fan, we knew it offered the finest features for quiet, stable, efficient performance in industrial service. Since that time, it has more than measured up to highest expectations.

A study of the "Q" Factor* features illustrated here will show you *why* this fan will give you your money's worth, and more, in *performance*. Further details in Bulletin F-102, your copy upon request.



ROTOR

1. Shroud die-formed to full curvature, matching inlet bell, for proper air flow in wheel.
2. Backward *curved blades* for stable air flow. Die-stamped, welded and riveted for maximum strength.
3. Heavy gauge back plate — extra-heavy hub.

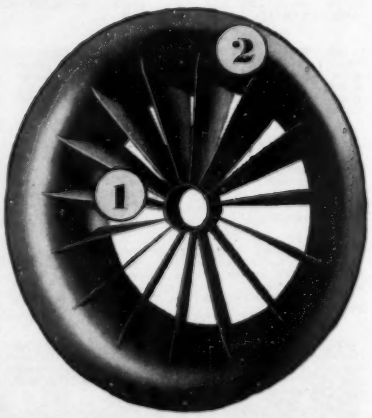


ENTIRE FAN

1. Housing proportioned and streamlined for peak efficiency.
2. Self-aligning bearings; choice of sleeve or anti-friction type.
3. Large, smooth inlet collar for easy duct connection.

INLET

1. Exclusive "Buffalo" inlet guide vanes reduce turbulence and assure full rated delivery, even when inlet conditions are unfavorable.
2. Smooth, die-formed inlet bell matches wheel shroud, further reduces inlet losses.



**The "Q" Factor — the Built-in Quality which provides trouble-free satisfaction and long life.*

"Buffalo"

BUFFALO FORGE COMPANY

175 MORTIMER STREET BUFFALO, N. Y.

PUBLISHERS OF "FAN ENGINEERING" HANDBOOK

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

Sales Representatives in all Principal Cities

VENTILATING AIR CLEANING AIR TEMPERING INDUCED DRAFT EXHAUSTING FORCED DRAFT COOLING HEATING PRESSURE BLOWING

10 TIMES FASTER THAN STITCHING!

SPINDLE TAPE LACING EQUIPMENT

Lace spindle tapes 10 times faster with Clipper No. 25 Spindle Tape Hooks. Tapes can be prepared in advance so frame is shut down only long enough to place new tape on the pulleys and join ends with connecting pin. Tapes run true—last longer—run smoother—require less tension—VIBRATION IS ELIMINATED.

CONDENSER TAPE LACING EQUIPMENT

Lace condenser tapes with Clipper No. 25 Condenser Tape Hooks. Clipper laced tapes, prepared in advance, can be installed in a fraction of the time required for endless tapes. Tape may be purchased in the roll at considerable saving.

CLIPPFR BELT LACER COMPANY, GRAND RAPIDS 2, MICHIGAN

Clipper BELT LACING EQUIPMENT

Here's one of those little things that help the big thing: *Better Running Work.* Use Guide Wire Sets at least every year to center the *back* of the thread guide directly over the center of the spindle. Thus you'll be assured of uniform tension all around your DIAMOND FINISH RINGS, for smoothest possible running.

75¢ plus postage

WHITINSVILLE (MASS.) SPINNING RING CO.

Makers of Spinning and Twister Rings since 1873

DIAMOND FINISH

Southern Representative: W. K. SHIRLEY, 25 Oak St., Belmont, N. C.

HELPFUL BOOKLETS FREE!

769. SURFACE TENSION DEPRESSANT — The booklet, "Mercerizing and Alkamerce—The Ideal Dry which can be used as a wetting agent ;a dye leveling agent, a penetrant in package dyeing.—HART PRODUCTS CORP., 1440 Broadway, New York, N. Y.

774. ROYCE TEXTILE CHEMICALS—This booklet briefly describes the leading Royce products for textile processing, printing, dyeing and finishing.—ROYCE CHEMICAL COMPANY, Carlton Hill, N. J.

KNITTING . . .

800. SYNTHANE TEXTILE PARTS—Folder on laminated bobbins, pirns, headless package tubes, hosiery turning and examining forms, sizing bobbins, etc.—SYNTHANE CORP., 9 River Road, Oaks, Pa.

801. THE WILDMAN SINGLEHEAD FULL-FASHIONED HOSIERY MACHINE—Literature on request from the WILDMAN MFG. CO., Full-Fashioned Division, Norristown, Pa.

808. REINER WARPER—Full width and sectional warpers for all requirements in the knitting and weaving industry full described in recent catalog.—ROBERT REINER, INC., Weehawken, N. J.

818. FORGED HEAD ALUMINUM BEAMS — Bulletin 49-A shows new beam capable of holding high yardage of nylon and rubber warps, with specifications. Also describes permanent mold aluminum tricot and section beams.—MILTON MACHINE WORKS, INC., Milton, Pa.

828. THE KIDDE KNITTER—Bulletin describing this newest in Raschel-type warp knitting machines and higher production attained with it.—KIDDE MANUFACTURING CO., INC., Farrand St., Bloomfield, N. J.

SEWING MACHINES . . .

924. BUTT-TACKING SEWING MACHINE—Booklet describes an operating installation of the Merrow single thread butt-tacking sewing machine. Gives performance data, and advantages of butt-tacking.—THE MERROW MACHINE COMPANY, 28 Laurel Street, Hartford, Connecticut.

925. SEWING MACHINES—The Lock-Stitch bulletin No. 258 describes and illustrates new, high speed, single needle Union Special Lock-Stitch machine for general purpose industrial sewing operations.—UNION SPECIAL MACHINE CO., 407 N. Franklin St., Chicago 10, Illinois.

MATERIALS HANDLING . . .

1003. CASTERS AND WHEELS—192 pages, describing casters and wheels suitable for all types of industrial applications. Every mechanical engineer and purchasing agent should have this.—DARNELL CORP., LTD., Long Beach 4, Calif.

1006. LANE CANVAS BASKETS—16-page illustrated booklet describing the Lane line of canvas baskets for textile use.—W. T. LANE & BROTHERS, Poughkeepsie, N. Y.

1007. OVERHEAD HANDLING EQUIPMENT — 56 pages of illustrations showing successful applications of monorail systems to meet every kind of handling problem.—THE AMERICAN MONORAIL CO., 13106 Athens Ave., Cleveland 7, Ohio.

1008. CASTERS AND WHEELS—An illustrated booklet with complete specifications showing a complete assortment of Cotton Textile Casters.—THE COLSON CORP., Elyria, Ohio.

1010. CONVEYOR KEY BOOK—A guide to production "step-ups" now possible with modern conveying. Shows time-and-effort savings. Well illustrated with photos showing plant layouts and sketches showing where, how and why different types of conveyors are used for maximum results.—LOGAN CO., 1115 Franklin St., Louisville, Ky.

1017. HOW TO OPERATE A LIFT TRUCK—Booklet gives information about the operation of a lift truck, preventive maintenance, safety and basic materials handling.—HYSTER COMPANY, Portland 8, Oregon.

1030. CDF RECEPTACLES—This 32-page catalog, R-11, profusely illustrated in color, shows Continental-Diamond's line of boxes, trucks, cans, barrels, baskets and trays. Complete description and specifications are given on each item.—CONTINENTAL-DIAMOND FIBRE CO., Newark 11, Del.

MISCELLANEOUS . . .

1102. BALING PRESSES—An illustrated folder describing this manufacturer's complete line of balers for all materials. Both downstroke and upstroke models.—ECONOMY BALER CO., Ann Arbor, Mich.

1103. UNBRAKO SCREWS— Illustrated 16-page booklet No. 570 gives data on Unbrako hollow set screws, with knurled point, self-locking features. Includes miscellaneous screw and locking nut data.—STANDARD PRESSED STEEL CO., Jenkintown, Pa.

1111. BRUSHES—A 26-page booklet is now available which describes and illustrates this manufacturer's line of brushes for the textile industry.—GASTONIA BRUSH COMPANY, Gastonia, N. C.

1112. THE RANDOM WEB PROCESS—Bulletin No. 101 describes the Rando-Webber and Rando-Feeder machines, and discusses the origin and development of the Random Web process which produces a non-oriented web suitable for processing into felts, wadding, heavy mats and non-woven fabrics on a continuous basis. Engineering data and cut-away diagrams.—CURLATOR CORPORATION, Textile Division, 565 Blossom Rd., Rochester, N. Y.

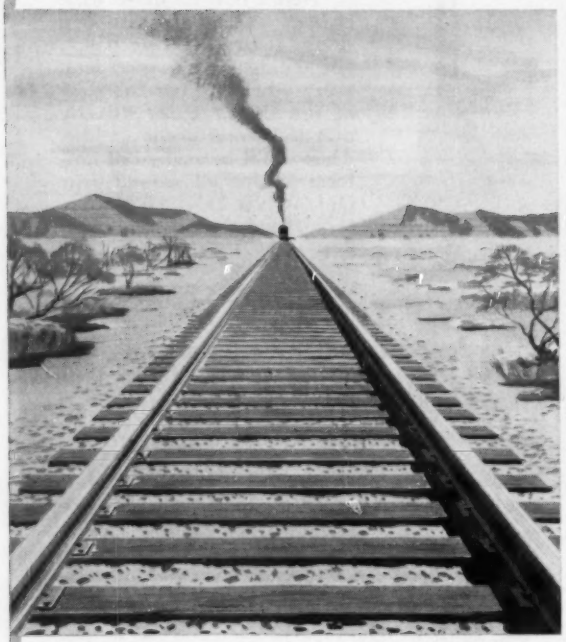
1113. MACHINE KNIVES — Catalog and price sheets describing this company's line of knives for use on textile machinery.—TAYLOR-STILES & CO., 21 Bridge St., Riegelsville, N. J.

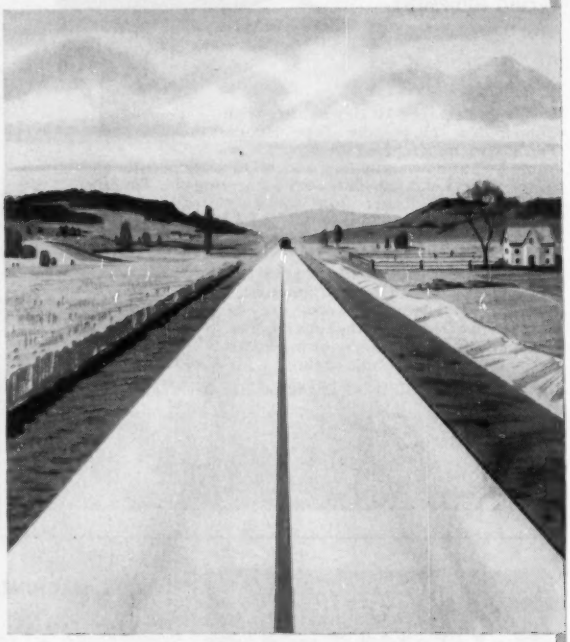
1115. TEXTILE WRAPPING MACHINES—Brochure describing automatic wrapping machines for various types of textile products, including the new Hayssen V-Type Underfold, most protective package made.—HAYSSEN MANUFACTURING CO., Sheboygan, Wisconsin.

1122. BALING PRESSES—Bulletins available describing this company's line of motor-driven and hydraulic baling presses for finished-goods, textile fibers, wool, and waste of all kinds.—LOGEMANN BROTHERS CO., 3150 West Burleigh St., Milwaukee, Wis.

DOW

. . . almost out of sight already . . .





YOUR CAUSTIC ORDER'S ON ITS WAY FROM DOW

The steel rails could be in New York or New Mexico . . . the highway in Oregon or Alabama. Wherever, however . . . it's another caustic soda order on the way from Dow. The order is just hours old, but it's on its way.

Dow's vast and amazingly flexible distribution network is the answer. Three plants and six shipping terminals are tied together by a network of order communications.

Hundreds of caustic customers have learned how resourceful and helpful Dow Technical Service men can be. Whether it's an irritating wrinkle in your processing or a basic decision about the form of caustic you can use to best advantage—a call to Dow brings these trained consultants to you. Surprising savings in plant operations often develop from their visits.

Put your caustic problems "out of sight" for good. Simply make sure your next caustic order is with Dow. THE DOW CHEMICAL COMPANY, Dept. AL 390F, Midland, Michigan.

you can depend on DOW CHEMICALS

DOW

What the TEXTILE MILLS are doing

(Continued from page 48)

nearly 2,500 people, more than 450 of whom have been working there for over 25 years.

Firestone Textiles celebrated 20 years of operation in Gastonia, N. C., during the period May 3-7, with a five-day program of special events for employees and their families and open-house tours for families, school groups, civic organizations, officials, and the general public. It was estimated that during the week 14,000 persons toured the plant which produces rayon and nylon cord for Firestone tires and cotton yarns and fabrics for commercial sale. On Thursday evening, May 5, 100 employees who had completed 20 years of service during April, May, and June were honored at a banquet in the Firestone recreation center; watches were presented to all of them on this occasion. The celebration was climaxed on Saturday, May 7, with a barbecue, square dance, and special entertainment for employees and their families in the new company parking lot.

Hosiery for ladies and men is now being produced at the recently organized **Foil Hosiery Mill** in Lexington, N. C.

Three 14 gauge interlock knitting machines have been added to the equipment in the **Freed Sportswear Co., Inc.,** mill in Brooklyn, N. Y. Suit and sweater fabrics are being manufactured on them.

Dunhill Knitting Mill, Philadelphia, Pa., is reported to have been purchased by Nathan Sopher, president of **Gilmar Knitwear Co.** of Philadelphia. Lastex fabrics for ladies' bathing suits will be manufactured in this plant where 40 Jacquard type circular knitting machines and one full-fashioned sweater machine are installed.

Men's and women's sweaters will be produced by **Glen Scot Knitwear, Inc.,** Philadelphia, Pa., a new knitting mill with Albert H. Goldstein as president and treasurer. Other officers of the firm are Miss Isabel Seltzer, vice-president; and Larry Borofsky, secretary. Production of about 600 dozen sweaters weekly, made on circular type machines, is expected.

When the drive closed recently, 98.2% of the more than 1,000 employees at **Goodyear Clearwater Mills** in Atco, Ga., were participating in the payroll savings plan for the purchase of U. S. Savings Bonds, according to the "Wingfoot Clan," mill employee publication. More than 350 employees in this mill have been saving by this method since before World War II, the publication reported.

A changeable copy sign with a copy area which is 100 ft long and 3 ft high has been installed by **Jantzen Knitting Mills** at the Portland, Oregon, plant as a part of the public relations program. Neon letters, attractive giant cut-outs, and the changeable copy area utilizing 17 inch plastic letters are at the disposal of the firm for messages to the inhabitants of, and visitors to, the city of Portland. The panel is rear illuminated so as to be effective by day or night.

Full-fashioned sweaters created and styled by the Parisian designer Schiaparelli are to be manufactured by **Pons Full-Fashioned Mills, Inc.,** Valdese, N. C., in a new plant addition now under construction. It is expected that about 500 dozen per week of these high bulk Orlon sweaters will be produced when the new facility is completed.

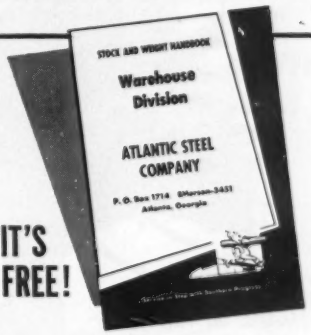
A loom swap between the Trion, Ga., and Ware Shoals, S. C., divisions of **Riegel Textile Corp.** required about eight months for completion. During that time 1894 looms were loaded and unloaded and 134 looms were relocated within the mill. A mobile crane was used to load and unload most of the looms and also to lift the 134 looms from the first floor to the second floor of the grey mill at Trion.

Shannon Hosiery Mills, Inc., Columbus, Ga., is now owned by **Chadbourn Hosiery Mills, Inc.,** of Charlotte, N. C. The production of the Shaleen brand of nylon hosiery will be continued at the Shannon plant, and production methods are being improved to enable the mill to reach a twelve-month sales goal of $2,000,000, the announcement stated.

The 700 operatives in the sheet and pillowcase sewing room at the **Springs Cotton Mills' Grace Bleachery** are quite comfortable as the result of the installation of a refrigeration system which is reported to have cost approximately $150,000.

To meet the greatly increased demand for its non-tarnishing metallic yarns, **Standard Yarn Mills,** Glendale,

Every Textile Mill Needs This Steel Handbook



IT'S FREE!

Latest, complete stock and weight handbook. Tells at a glance the types, sizes and shapes of steel warehouse products carried for you by one of the South's largest steel warehouses. Saves you valuable time. We'll be glad to send a copy on request. Then, you can easily order by phone, whatever you need, one piece or a carload.

- Cold-finished Shafting
- Carbon Steel Bars and Shapes
- Plates and Sheets
- Structurals
- Stainless Steels

24 to 48 HOUR DELIVERY Throughout the South BY TRAIN • BY TRUCK

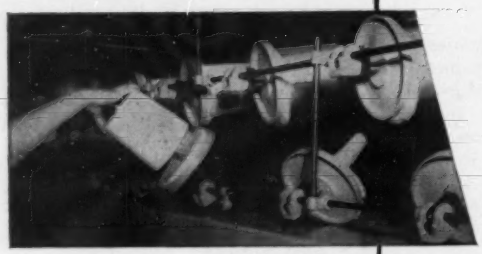
WAREHOUSE DIVISION
Atlantic Steel Company
575 14th St. N.W. Atlanta 1, Georgia EMerson 3451

FOSTER-MUSCHAMP MODEL 66

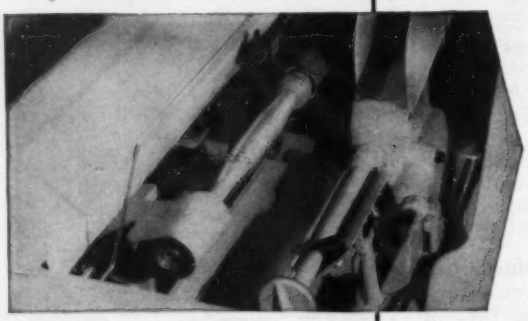
Automatic FILLING WINDER

(Made in Westfield, Mass., U.S.A.)

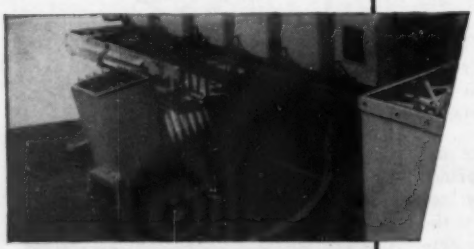
MODEL 66 FEATURES WHICH CONTRIBUTE TO LOW OPERATING COST



Magazine Creel for 4 lb. Cones



Automatic Donning and Doffing of Cones



Automatic Pinboarding

ALSO 15,000 R. P. M. SPINDLE SPEED

OPERATING COST

AS LOW AS ¼¢ PER LB. OF YARN QUILLED

For example, when equipped with magazine creel carrying 4 lb. cones, central bobbin hopper replenisher and automatic pinboarder or filling box stacker and when quilling 20,000 lbs. of 150 denier rayon in 40 hours the time required for operating labor is as follows:

	Time per Package	*Time for 20,000 lbs.*
Creeling in	.25 min.	1250. min.
Piecing up broken ends (1-½% breakage)	.11 min.	550. min.
Supplying pinboards	.0488 min.	244. min.
Other duties (5% tot. time)	.024 min.	120. min.
Personal time (5% tot. time)	.024 min.	120. min.
TOTAL TIME (1 operator 40 hrs.)	.4568 min.	2284. min.*

*Note there are 2400 minutes in 40 hours.

Standard hourly rate of 1 operator times 40 hrs. divided by 20,000 equals $ .0025.

Compare these figures with your own operating costs or with those of any competing automatic winder and decide for yourself if the Model 66 is worth investigating. Then learn all about its 8 POINTS OF SUPERIORITY; send for FOSTER FACTS — Volume 4 — Number 5.

FOSTER MACHINE COMPANY

A Winder for Every Textile Purpose

Westfield, Massachusetts, U.S.A.

Southern Office—Johnston Bldg., Charlotte, N. C.

Canadian Representative — Ross Whitehead & Co. Ltd., 1475 Mountain St., Montreal, Que. and 35-37 King St. W., Toronto, Ont.

What the TEXTILE MILLS are doing

L. I., N. Y., is erecting a new, ultra-modern plant at 6205 30th Avenue, Woodside, L. I., N. Y. The new plant is fire-proof, surrounded by extensive parking areas, and covers 30,000 sq ft of space. The main factory at 83rd St. and Cooper Ave., Glendale, will also be retained. Estimated time of completion is the latter part of July.

Staple and semi-novelty fabrics will be manufactured in a new woolen mill to be built in Barnwell, S. C., according to an announcement by **Textron American, Inc.** 400,000 sq ft of space will be available in the windowless, fully air conditioned and refrigerated plant. Parking space will be provided for 1,000 employees. Operations will include spinning, weaving, and finishing.

Stock dyed woolen fabric for the men's and women's wear trade will be manufactured in a modern 200,000 sq ft textile mill which is to be constructed adjacent to the present plant of **Dublin** (Ga.) **Mills,** a division of M. T. Stevens southern division of J. P. Stevens & Co., New York, N. Y. According to the announcement, it will be a completely integrated plant. Partial operations will begin by Jan. 1, 1956. Approximately 350 employees will be required when the new plant is completed.

Equipment for the recovery of the caustic used in wet processing is being installed at **Union Bleachery** in Greenville, S. C., to reduce pollution of water emptied by the plant into Reedy River which flows through the city. It is expected that this will reduce the offensive odor eminating from the river, particularly in time of low water.

According to an announcement, stockholders of **Union Mills Co.** and **Monroe Mills Co.,** combed yarn manufacturing plants located in Monroe, N. C., voted unanimously to merge their corporations, with Union Mills Co. being the surviving corporation. It is expected that Albert S. Orr will continue to serve as president and treasurer; David R. Johnston, vice-president; and Donald Jonas, secretary. Plans are that Monroe Mills Co. property will be offered for sale and the Union Mills Co. plant will be expanded to provide for installation of 5,000 additional spindles.

Aluminized jacketing, which is resistant to fire, acid, and water, has been developed by the textile division of the **United States Rubber Co.** Made of aluminum foil laminated onto vapor-proofed asbestos cloth, it is called asbeston pipe insulation jacketing and can be used to cover pipe insulations in heating, piping, refrigeration, and air conditioning systems in electric utility plants and commercial and institutional buildings.

Finishing and shipping capacity of its full-fashioned hosiery mill at Albemarle, N. C., will be doubled when a new addition now under construction is completed by **Wiscassett Mills Co.** Of masonry and steel construction, the new unit will be two stories high and measure 175 ft by 78 ft.

A warehouse providing 100,000 sq ft of floor space is to be erected near the Greenville, S. C., plant of **Woodside Mills.** Consisting of 10 compartments of 10,000 sq ft each, the warehouse will serve as a central storage point for all cotton, synthetic yarn, and other raw products required by the individual Woodside plants, according to an announcement by Lockwood Greene Engineers, Inc., architects-engineers on this project. There will also be 21,000 sq ft of covered platform. * * * Manufacturing space at Woodside Mills' Easley, S. C., plant will be increased by about 6,000 sq ft when new construction and modification of existing facilities now in process have been completed.

Fo-Mac Inc., 15 Lewis Street, Central Falls, R. I., is a new corporation whose end product is braided fish lines. Richard McCallum, for the past fifteen years with Atlantic Rayon Corp., Providence, is president and manager.

Commonwealth Thread Co. has moved from Lonsdale, R. I., to new and larger quarters at 86 Tremont St., Central Falls.

New England Printed Tape Co. is a new concern now in full production at 25 Esten Ave., Pawtucket, R. I., manufacturing non-woven bonded cotton and synthetic tape and printing to customers' orders. Alfred Winkler is vice-president in charge of production.

Atlantic Rayon Corp., Providence, R. I., has been sold to **Malina Co., Inc.,** New York, N. Y. Harold F. C. Wilcox continues as president. E. A. Krueger is plant manager.

Millbury Mills, West Millbury,

G-C SAYS:

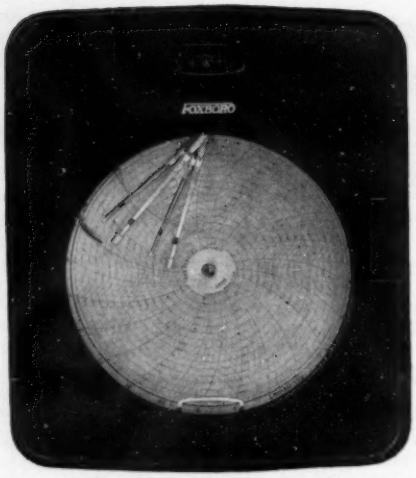
BEAT THE HEAT OF FRICTION WITH G-C LUBRICANTS!

"FORMERLY REPLACED 100 BEARINGS PER WEEK . . . NOW REPLACE 12!!"

One of the largest wet processing plants (name on request) in the nation reports that Ben-Boy 55-B non-melting lubricant has reduced bearing replacement from 100 per week to 12 per week! That's a *big* saving! Georgia-Carolina can save your mill money, too! Write for details and samples.

- BEN BOY High Heat Lubricant
- G-C NON-MELTING OIL for comb Boxes, Top Rolls and General Lubrication.
- G-C NON-MELTING TWISTER RING LUBRICANT
- WHITE STAR SPINDLE OIL
- KALOOM OIL NUMBER 9
- G-C NON-MELTING OILER

GEORGIA CAROLINA OIL COMPANY
MACON G-C GEORGIA



WET AND DRY BULB INSTRUMENTS

These Foxboro instruments give separate wet and dry bulb records on the same chart . . . in dry bulb ranges from 32°F. to 212°F. They are exceptionally accurate and stable. Bulbs can be placed up to 200 feet from the instrument. Available as recorders, or air operated (Model 40) and electric (Rotax) controllers, including multi-zone and time-humidity controllers.

DIRECT-READING DEW POINT INSTRUMENTS

Foxboro recently introduced the first simple, continuous dew point measuring instruments for industrial use. Their patented humidity sensitive element, the "Dewcel", requires no water box or moving air. Accuracy is unimpaired by dust or lint. Foxboro recording and controlling instruments, used with the "Dewcel", give direct readings from —50°F. to 142°F. dewpoint, at dry bulb temperatures up to 220°F. Readings easily converted to absolute or relative humidity. Foxboro instruments for dew point include liquid expansion type and electronic type recorders and controllers . . . with either pneumatic or electric control action. The Multi-Record Dynalog* for dew point provides up to 6 records on a single round chart.

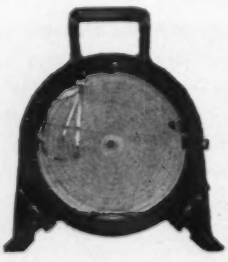
*Reg. U. S. Pat. Off.

better measurement and control of humidity

DIRECT-READING RELATIVE HUMIDITY INSTRUMENTS

Direct-reading relative humidity hygroscopic instruments are designed to operate in temperatures up to 140°F. They are available for recording (including the portable model shown here), and controlling (pneumatic M-40, or electric *Rotax*, operated). Sensitive, accurate, reliable.

Combination temperature and relative humidity recorders (0-100°F and 0-100° R.H.) are shipped from stock.



Ever since it introduced the first successful long-distance wet-and-dry bulb psychrometer, Foxboro has pioneered in the development of new and improved methods for the measurement and control of humidity. In its knowledge of textile process requirements, and its complete line of better-engineered instruments, there's more than likely the ideal solution to your own problem.

Why not write for complete information, or talk it over with a Foxboro Engineer, now? **The Foxboro Company, 487 Neponset Ave., Foxboro, Mass., U. S. A.**

FOXBORO REG. U. S. PAT. OFF. **HUMIDITY INSTRUMENTS**

FACTORIES IN THE UNITED STATES, CANADA AND ENGLAND

What the TEXTILE MILLS are doing

Mass., is a new weaving plant now in full production. Frank Nicoletti, who was for many years overseer of weaving at Stanrich Mills, is the owner.

Primrose Dyeing & Finishing Co., Garnersville, N. Y., has just been organized. Joseph Feld is the proprietor and John Carbone overseer of dyeing.

Summitt Mills Corp., knit goods manufacturer of Philmont, N. Y., has changed its name to Mister Ease Inc.

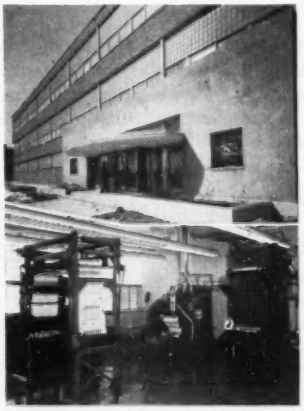
Montrose Worsted Co., Inc., is now in production in a part of the former Nyanza Mill in Woonsocket, R. I., manufacturing men's wear worsteds. Leslie R. Strickland, formerly a designer for Guerin Mills, heads the new company.

Hargo Woolen Mills, Inc., is moving from New Bedford to the former Keene (N. H.) Silk Fiber Mill building. Additional equipment has been purchased, and the plant is to be a completely integrated woolen mill.

SUPPLIERS News

WHAT THEY ARE DOING

Occupancy of a new research and engineering center, construction of which was recently completed, by more than 300 chemists, engineers, and technologists of **National Aniline Division,** Allied Chemical and Dye Corp., was formally marked by open house ceremonies during the period May 19-21. Located in Buffalo, N. Y., adjacent to National Aniline's dyestuffs and organic chemical manufacturing plant, the center provides chemical research and development and engineering service to all

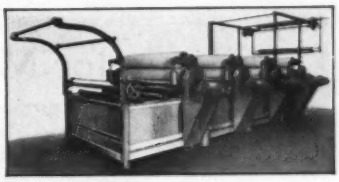


Entrance to research building (upper photo) and dye application research lab (below).

National Aniline Division plants and facilities located throughout the United States. The center comprises two buildings—a research building and an engineering building—joined by a vehicle gateway. The research building is a three-story structure with a floor area of 36,500 sq ft devoted to laboratories and 20,000 sq ft for offices, library, and service facilities. A one-story wing 111 ft long is assigned to dye application research exclusively. The engineering building, two stories in height, has a total floor area of 23,000 sq ft.

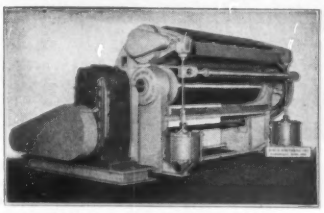
Robert S. Stevenson, executive vice-president, has been elected president of **Allis-Chalmers Manufacturing Co.** to succeed the late William A. Roberts. Mr. Stevenson started with Allis-Chalmers in 1933 as a salesman in the Kansas City branch office of the tractor division. * * * Election of Harold M. Schudt as president of Canadian Allis-Chalmers Ltd. was recently announced. Mr. Schudt replaces Mark C. Low who has resigned. * * * The appointment of William A. Yost, Jr., to the newly created post of vice-president, staff operations, was announced recently. He was formerly vice-president, general machinery division. In his new position, Mr. Yost will generally direct activities in the firm's industrial relations, public relations, legal, purchasing, comptroller, and research divisions.

Neil B. Conley has been promoted from assistant director of sales for the organic chemical division, **American Cyanamid Co.,** to director of

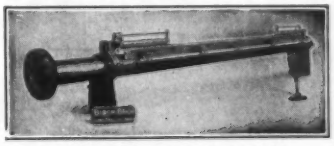


REGULATED-TENSION, OPEN-WIDTH CONTINUOUS MACHINE

A machine of stainless steel construction, designed so that additional units may be readily added. A standard machine which with proper modifications may be used for Boiling-Off, Scouring, Crabbing, Dyeing or Open Soaping. A roller bearing equipped machine with the pressure applied to rubber squeeze rolls by air cylinders. Drive by D.C. motors controlled by Dancer Rolls. Used on Pile Fabrics, Cottons, Rayons, Rayon Blends, Gabardines, Worsteds and Woolens.



NEW TWO ROLL MANGLE OR PADDER. 5, 10, OR 15 TON CAPACITY. PRESSURE BY AIR CYLINDERS. GUARD FOR NIP.



FOR BEST EXTRACTION

Patent Reenforced Adjustable Vacuum Extracting Box with Automatic Slot Seals. Used in combination with dry cans, scutchers, mangles and continuous machines.

SPREADER AND GUIDER

for keeping goods central and free from wrinkles in open width dyeing and elsewhere. Widths up to 20 feet. Electrically controlled. Of stainless steel.

BIRCH BROTHERS, INC.

32 KENT STREET
SOMERVILLE, MASS.
Phone: PRospect 6-3512
Southern Representative:
John C. Cosby, P. O. Box 212
Greenville, S. C.
HAROLD W. BIRCH CLIFFORD W. BIRCH
CLIFFORD W. BIRCH, JR.

Topic for Mill Management

Which one is best? The Utility Uptwister (left) has been used in many mills for many years. The Unirail® (right) is a new development — capable of extremely high speeds, producing a 2 lb. headless package. Your Utility or other old Uptwisters may well be the most efficient, economical machines for the job they are doing. Or, replacement with Unirails for certain operations might bring you the economies and increased production you need to operate most profitably. Our Profit-Factor Study gives the answer, in facts and figures.

We help you find your profit factor

Just what equipment do you need to modernize for maximum profit? What is the best way to acquire it? What about competition?

Obviously there is no quick valid answer to these questions. But there are answers. And Universal has set up its Profit Factor Study precisely to help you get the *right* answers.

This is a detailed, *confidential* study of a given mill's twisting and winding operation — including related operations — followed by a complete, expert analysis on how to make production more efficient, and profitable, wherever possible.

The Profit-Factor Study is supplemented by the Leesona Pay-As-You-Profit Plans, designed to help mills strengthen their competitive position while safe-guarding their capital and borrowing power. These plans provide for either long-term purchase or long-term lease of Leesona twisting and winding machinery.

This folder introduces you to the Leesona Double-Profit Service, including Profit Factor Studies and Pay-As-You-Profit Plans. Read how you may take advantage of either of its two valuable features — or combine both to profit two ways. A copy is yours for the asking.

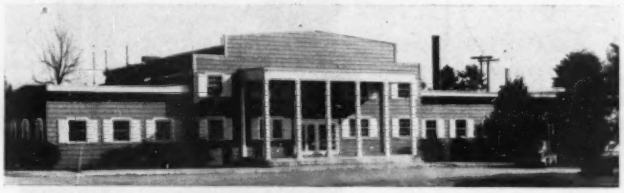
23.4.29

UNIVERSAL WINDING COMPANY

P. O. BOX 1605, PROVIDENCE 1, R. I.

Sales Offices: Boston • Philadelphia • Utica • Charlotte • Atlanta • Los Angeles

Winding and Twisting Machinery for Natural and Synthetic Yarns



Dyes Are Being Made in this South Carolina Plant

Production of fast colors is now under way at the Croft Works, Spartanburg, S. C., on the site purchased last year by **Alliance Color & Chemical Co.** and **Blackman-Uhler Co.,** then newly merged into The Andover Co. Naphthols are the principal outputs of the new plant. According to the announcement, the facility provides: (1) important additions to the line of naphthols; (2) increased over-all productive capacity; (3) same-day or overnight deliveries throughout the South; and (4) more laboratory facilities to devote to customer problems.

Erwin Thornton, who has been in charge of the Blackman-Uhler laboratory, has been appointed superintendent of the new plant. Donald Belcher, formerly Mr. Thornton's assistant, has been promoted to the position held by Mr. Thornton.

sales of the division. Mr. Conley joined American Cyanamid in 1931.

The American Pulley Co. has announced the purchase of the assets of **Safeway Industrial Equipment Co.,** Chicago, Ill., manufacturer of a complete line of manually and electrically operated hydraulic lift trucks. It is planned to merchandise these lift trucks under the trade name of "American Safeway" and through the nation-wide American Pulley distribution network.

A new technical representative at **American Viscose Corp.'s** Philadelphia office is Dr. Arthur L. Allewelt, who was previously a senior research chemist at the corporation's Marcus Hook, Pa., research center. Dr. Allewelt is assigned to textile chemicals sales. * * * Five more institutions will be included in the college relations program of American Viscose for the academic year 1955-56, than in 1954-55. The new total is thirty-four and reflects Avisco's continued interest in encouraging advanced education for the youth of America.

J. M. Hoerner has been promoted to general manager of the Chemical Division of **Armour and Co.** He succeeds F. G. Patton who has been appointed general manager of the Armour Auxiliaries.

Arrow Needle Co. of Manchester, N. H., a wholly-owned subsidiary of **Textile Machine Works** of Reading, Pa., has contracted for the erection of a new single story building to be used for offices and manufacturing operations on S. Willow Street, in Manchester. It is expected the building will be completed the later part of this year, and all operations presently housed in Arrow's Hollis Street quarters, including those recently moved from its Shelton, N. J., division, will be transferred to the S. Willow Street plant.

J. E. Seacord, Jr., formerly manager of the Atlanta, Ga., branch of **Ashworth Bros., Inc.,** was recently transferred to the Charlotte, N. C., sales and service headquarters as assistant southern manager. In addition to serving as assistant southern manager, Mr. Seacord will cover that part of the territory in North Carolina, South Carolina, and Tennessee formerly handled by Henry Ashworth who is now on the staff of president R. C. Ashworth, Jr., with headquarters in the executive offices of the company at Fall River, Mass. W. G. Halstead, who for the past three years has represented Ashworth in South Carolina, has been

Are You Getting a Fair Day's Work for a Fair Day's Pay?

As Production Engineers we specialize in the utilization of

LABOR—EQUIPMENT—MATERIAL

Our list of clients reads like the Blue Book of American Manufacture, and in our files are many expressions as to our service and results accomplished, like the following:

"Their representatives employed in installing this system were of high caliber, and we are greatly pleased with the result of their work."
ONE OF THE COUNTRY'S LEADING HOSIERY PLANTS

Write for a free copy of "Labor and Management Benefit by Industrial Engineering Principles," and our booklet "A Fair Day's Pay and in return A Fair Day's Work".

AMERICAN ASSOCIATED CONSULTANTS, Inc.

D. S. KEOGH, President — H. B. CRAFT, Vice President and Manager of Operations

250 PARK AVENUE, NEW YORK 17, N. Y.
GRANT BUILDING, PITTSBURGH, PA.
30 CAMDEN ROAD, ATLANTA, GA.

Write us this letter

YOUR LETTER HEAD
ANYTOWN, U.S.A.

date here

Van Vlaanderen Machine Co.
370 Straight Street
Paterson 3, New Jersey

Gentlemen:

Like many another dyehouse, ours still has a number of dyeing machines that are getting old. You may be right in claiming that new high-production machines could improve our competitive position and profit potential. Anyway, we are interested in having your opinion, without obligation of course.

We process _____
(list types of goods)

on _____
(Jigs, becks, etc.)

Yours very truly,
Your Signature
(Title here)

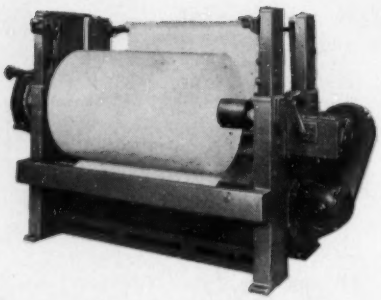
If you are concerned about your competitive position, why not write use a letter like the one above. We are sure we can help improve your profit potential, as we have for many others.

The textile industry has a busy future coming up. For years our population has increased at the rate of 2,000,000 a year and will continue to do so for years to come. Are you in a position to get your share of this ever increasing market?

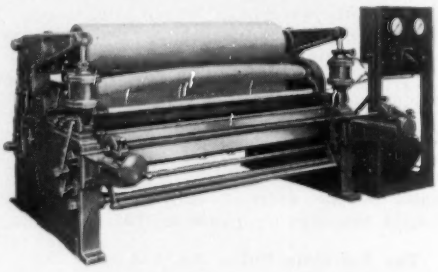
Why not give a critical look at each of your dyeing machines? Many companies are still using some equipment that has lost it's profit making possibilities. Van Vlaanderen can show you that replacement with modern equipment will give you better production, better quality work and better profits.

Whether you need a single machine or an entire plant you should have the benefit of our 53 years of know-how.

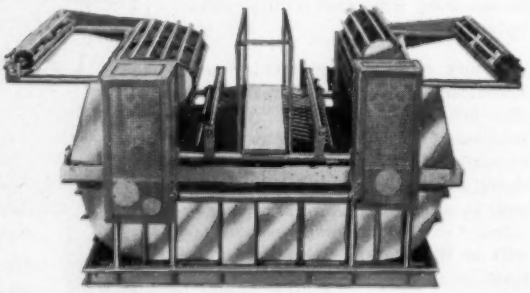
Our engineers invite your inquiry.



The Van Vlaanderen Dyemaster gives better results on all fabrics from sheers to heavy ducks. Constant cloth tension, from practically none for sheers to full for cotton ducks, makes the Dyemaster the most versatile American dyeing machine. Even dyeing results are achieved by near-constant cloth speed through a special differential transmission.



The Van Vlaanderen Ten Ton, 2 Roll Padder is a modern, versatile machine for finishing, resin impregnating and dyeing. It has a new slip-clutch take-up, operating through friction plate-clutches for sensitive tension control. Variable speed drive gives quiet, smooth operation. Pneumatic-pressure or micro-spring set optional. Operators' panel controls each cylinder separately to allow equalizing of nip pressure.



The Van Vlaanderen Duplex Dyeing Machine is a patented reel dyeing machine especially designed to do continuous strand-form piece dyeing of all qualities of goods from lingerie sheers to heavy dress fabrics. Has nearly double capacity with the same floor space compared with the old-fashioned single dye reel.

VAN VLAANDEREN

VAN VLAANDEREN MACHINE COMPANY

370 Straight Street, • Paterson 3, New Jersey

In the South — Parrott and Ballentine • 610 South Carolina National Bank Building • Greenville, South Carolina

WORLD'S LARGEST MANUFACTURER OF MACHINES FOR PROCESSING MODERN FABRICS

transferred and promoted to manager of the Atlanta branch. He is covering that part of the territory formerly handled by Mr. Seacord. Replacing Mr. Halstead in the Greenville, S. C., sales and service organization is C. C. Withington who recently came to the Ashworth organi-

Mr. Withington

zation from the Utica & Mohawk Cotton Mills Div. of J. P. Stevens & Co., Inc., where he was assistant overseer of carding.

Atlantic Steel Co. broke ground on May 17 for a new $8,500,000 merchant bar and rod mill. According to R. S. Lynch, president, this new mill is the first phase of a modernization and improvement program currently under way and will substantially increase the company's capacity and productive range. Other features of the company's modernization program include a second electric furnace and a new administration building. Operation of the new mill is expected to begin in Sept. 1956.

H. S. (Bud) Schuler has joined the Beckman Division of **Beckman Instruments, Inc.,** as advertising and sales promotion manager. Mr. Schuler came to Beckman from Westinghouse Electric Corp.

Heading the newly formed fabric development department of **The Chemstrand Corp.,** New York, N. Y., is J. Fred Murray who has been active in the Acrilan sales division for the past eight months. According to the announcement, the new department has been set up to give added service to Chemstrand customers. * * * Paul E. Stocker has joined the fabric development department as a textile technologist, having been formerly associated with the fabric development department of Greenwood Mills, Inc. * * * Donald W. Bedell has joined Chemstrand as an Acrilan sales specialist, and is responsible for sales development of Acrilan in the woolen and worsted industry. Coming to Chemstrand from Meinhard & Co., Mr. Bedell is assigned to Acrilan sales division in the general sales office in New York City.

Richard E. Correy has been named executive field representative in the southwestern states for **Commercial Factors Corp.** He makes his headquarters in Memphis, Tenn.

John Draper Gannett, purchasing agent of **Draper Corp.,** Hopedale, Mass., has been elected to the board of directors to fill the vacancy created by the resignation of Eben S. Draper. * * * A 30,000 sq ft plant designed for sawing, drying, and storing dogwood and hickory lumber used in the manufacture of shuttles and picker sticks is planned by Draper to be built at Swannanoa, N. C. Located on the tract of land purchased by the corporation in 1949, the new plant will replace the present Biltmore, N. C., operation, according to the announcement. * * * To bring machine shop capacity in line with recently increased foundry facilities, **Draper Corp.,** will add 42,000 sq ft of floor space to its plant at East Spartanburg, S. C. This new building will be a one-story brick and steel structure and is designed to permit maximum use of material handling equipment

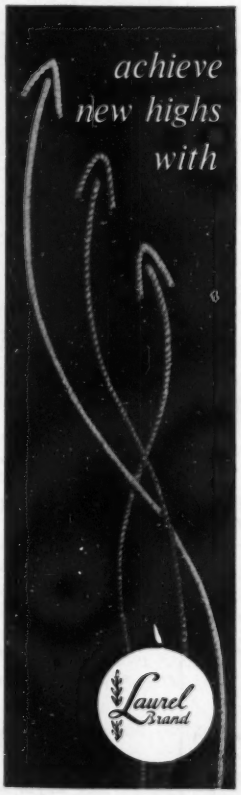
SUPPLIERS News
WHAT THEY ARE DOING

and modern machinery for the production of loom parts, changeovers, and new attachments. According to the announcement, it represents another step in maintaining a high level of service and prompt delivery of loom parts and mechanisms in the South.

Joseph L. Sterett has been appointed sales promotion representa-

Mr. Sterett

tive for the shipping container division of **Robert Gair Co., Inc.,** with headquarters in the firm's New York



hydrocop *and*
3b softener

Use this efficient—time proven—emulsion combination from your winder emulsion troughs and profit from a new high in quality, luster and softness. HYDROCOP and 3B SOFTENER will help you to obtain increased production of smooth, more even running, more easily knit yarns.

HYDROCOP and **3B SOFTENER** speed up the conditioning of greige, dyed or bleached yarns; cotton; woolen, worsted and cashmere; orlon; nylon; rayon and blends. Produced from first quality vegetable oils and non-mineral waxes which insure dependable performance, HYDROCOP and 3B SOFTENER are highly resistant to aging and discoloration, and do not cause shade change.

CHENILLE YARNS—Hydrocop—used with Mildant RX—will produce perfectly conditioned, smooth running, mildew resistant chenille yarns.

let us send you samples and more information.

LAUREL SOAP MANUFACTURING CO., INC.

Wm. H. Bertolet's Sons · established 1909
2603 East Tioga Street, Philadelphia 34, Pa.

Warehouses: Paterson, N. J., Chattanooga, Tenn., Charlotte, N. C.

For further information use Handy Return Card, Page 163

DARY
Ring Travelers

OUR SPECIALTY!

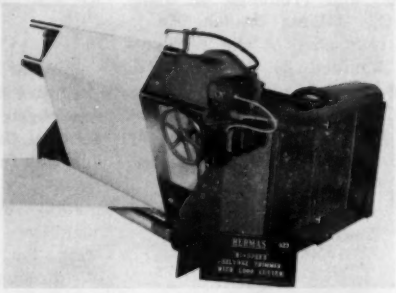
Our specialty is making Dary ring travelers—an item well and favorably known to the textile trade for more than half a century. Though times change, we at Dary hold to one course without deviation. We continue to serve, by pursuing our specialty.

When you need ring travelers, call on our experience to aid your choice. Consult your friendly Dary representative!

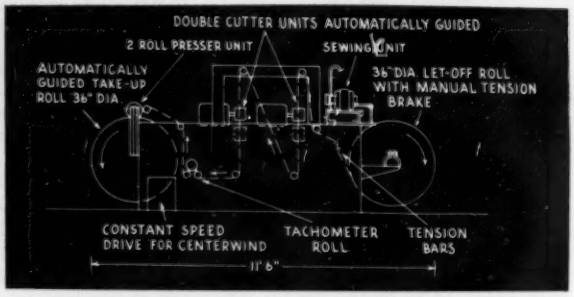
Always specify
DARY Ring Travelers

THE DARY RING TRAVELER CO.
TAUNTON, MASSACHUSETTS

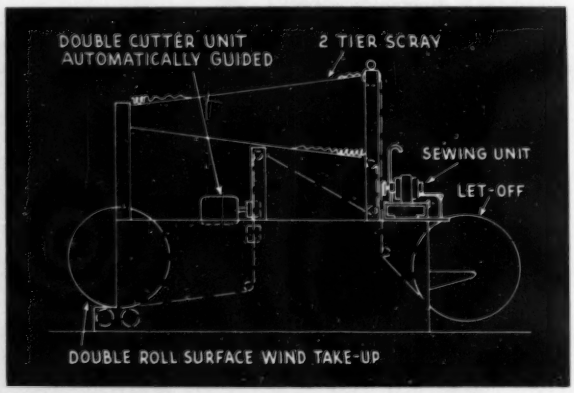
LINDSEY I. PHILLIPS, TREASURER, TAUNTON, MASS.
JOHN H. O'NEILL, BOX 720, ATLANTA, GA.
JAMES H. CARVER, BOX 22, RUTHERFORDTON, N. C.
CRAWFORD "JACK" RHYMER, BOX 2261, GREENVILLE, S.C.



HERMAS Selvage Trimmer Makes Many Clothroom Operations Automatic



Two double cutter units on each selvage. Center wind take-up roll automatically guided to assure straight edges.



Double cutter unit on one or both selvages, two tier scray, sewing unit.

Hermas new selvage trimmer combined with various attachments now makes cleaning the selvage of textured cloth and other fabrics, including woolens and worsteds, entirely automatic.

This machine cleans selvages at 50 to 150 yards a minute. It may be combined with other machines. We illustrate two such possible setups here. We have many others.

Write for information on this machine and various possible combinations with other machines.

HERMAS MACHINE CO.

227 Royal Avenue Hawthorne, New Jersey

SUPPLIERS News — WHAT THEY ARE DOING

office. His work will include participation in product development activity.

The Metlon Corp. has appointed three new representatives to cover the southern territory, enabling the company to give more efficient service to users of metallic yarns: Karl H. Inderfurth of Charlotte, N. C., covers North and South Carolina, West Virginia, and Virginia; Will Plowden and Dave Williams of Griffin, Ga., cover mills in Georgia, Alabama, Mississippi, Texas, Florida, and Tennessee.

Mr. Inderfurth *(right)*

Mr. Plowden *(lower left)*

Mr. Williams *(lower right)*

J. S. Fallow Co., 279 Union St., New Bedford, Mass., and Montreal, Que., Canada, is agent in New England and Canada for **Cocker Machine & Foundry Co.**

Carl H. Meuller and John E. Fenner have been appointed vice-presidents in charge of engineering and sales, respectively, by **Lincoln Engineering Co.,** St. Louis, Mo. Both men have been with the company 20 years.

New president of **The Marquette Metal Products Co.** is Fred E. Harrell, who was formerly general manager. He succeeds Herbert Gleitz, who has retired after 35 years with the company.

The Textile Division of **McKiernan-Terry Corp.** has appointed the organization of John R. Schenck and Alexander F. Schenck as its representative, with headquarters at 812 Johnston Building, Charlotte, N. C., and covering the states of Virginia, West Virginia, Tennessee, North Carolina, South Carolina, Georgia, Alabama, and Florida.

Wm. Howlett Gardner, previously with the New Products Division, **National Aniline Division,** Allied Chemical & Dye Corp., New York, N. Y., is now attached to the chemical sales department of that company. In his new position, Dr. Gardner will be responsible for the preparation of technical literature on National's new chemicals, and will act as a technical representative in the sale and application of National Aniline chemicals.

New Draper Office and Warehouse in Atlanta

An open house program, attended by hundreds of mill personnel, marked the official opening of the new Draper Corp. Atlanta warehouse.

This new building permits faster processing of orders and improved distribution of loom parts, accessories, and mechanisms to Draper customers. Facilities for shipping by either truck or rail are provided.

Over 7500 different items are stocked for immediate delivery.

In addition to parts supply, this warehouse is the headquarters for sales and service personnel covering Georgia, Alabama, Mississippi, Louisiana, Arkansas, Tennessee, Texas, Oklahoma, Indiana, and California, under the administration of Walter M. Mitchell, vice-president, and A. Wilton Kilgore, division manager.

The EMBLEM OF QUALITY METAL SHIELDS

For Spools and Bobbins

Anderson Shields are dependable protection against chipping, splitting, and breaking of spools, bobbins, and paper caps. Even the most minute details are carefully worked out to make Anderson the highest in precision, the smoothest in finish, the best in performance. The Anderson Emblem is your assurance of the finest shields you can buy.

Insist on Anderson when you order metal shields regardless of when you buy spools and bobbins.

TEXTILE SHIELD CO., INC.

J. N. ANDERSON, Treasurer

LAWRENCE, MASS., U. S. A.

You can

PROTECT

Calender Rolls

with the RCA

METAL DETECTOR

With this revolutionary new electronic device, designed especially for the textile field, you can add to the life of your costly calender rolls, cutting knives and dies and reduce loss from damaged products.

Finding metal particles the eye could never see—both magnetic and non-magnetic—the detector sounds an alarm and/or stops the traveling material, or causes dye or chalk to mark the spot. It may be employed with woven or knitted material traveling at speeds from 10 to 1000 feet per minute, with full inspection sensitivity. Extremely sensitive, it will detect a steel sphere .039 inches in diameter.

The dollars saved with the RCA Metal Detector may be all gain in a short time—the device soon pays for itself.

Quickly installed in your plant by your own personnel, under the supervision of the RCA Service Company, the detector is simple to operate and easy to maintain. Service Company facilities are available to help keep maintenance at a minimum.

RCA . . . the world's best name for QUALITY

Use Coupon Below for More Information

Radio Corporation of America
Dept. T-271, Building 15-1, Camden, N. J.

Please send me information on the RCA Electronic Metal Detector for textile applications.

Name_____ Title_____

Company_____

Address_____

City_____ Zone_____ State_____

RCA

RADIO CORPORATION of AMERICA

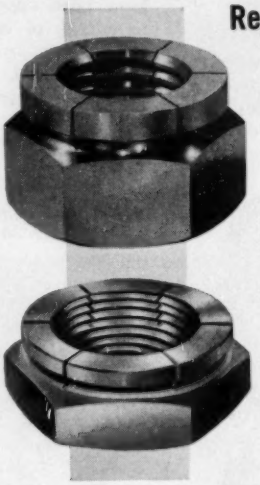
ENGINEERING PRODUCTS DIVISION · CAMDEN, N. J.

In Canada: RCA VICTOR Company Limited, Montreal

specify standard

FLEXLOC® SELF-LOCKING NUTS

Regular and Thin Types



Regular FLEXLOCS are one-piece, all-metal, standard height nuts that lock securely, even under extreme vibration. Thin nuts have the same one-piece, all-metal construction and the same positive locking principle, but these nuts are approximately 30% thinner. Your FLEXLOC industrial distributor stocks both types: regular FLEXLOCS in sizes from #4 to 2″; thin FLEXLOCS in sizes from #6 to 1½″. Ask him for catalog information and samples. Or write STANDARD PRESSED STEEL Co., Jenkintown 34, Pa.

FLEXLOC LOCKNUT DIVISION

SPS

JENKINTOWN PENNSYLVANIA

TAKE A VACATION . . . FROM WORRY!

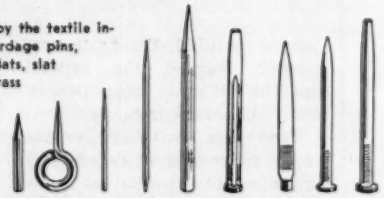
Forget your worries with Lazenby winders. They're made to give you top performance and best results. To operate smoothly, uniformly and give maximum yardage. Send us a small supply of your yarn and we'll wind and return with Test Wind Report and Catalog.

F. A. LAZENBY COMPANY

3106 ELM AVE. BALTIMORE 11, MD.

PINS, LAGS, PICKERS & PARTS

Everything required by the textile industry: card pins, cordage pins, doffer teeth, apron slats, slat pins, dryer plates, brass tenter plates, corrosion resistant pins.



B Co.

Volume production by precision methods permits attractive prices on all types. Prompt deliveries. W. H. Bagshaw Co., Inc. (Est. 1870) 42 Pine St., Nashua, N. H.

by BAGSHAW

SUPPLIERS News
WHAT THEY ARE DOING

John S. Brice has joined the Chemical Division of the **Goodyear Tire & Rubber Co.** as a field representative in the southeastern territory, with headquarters in Atlanta, Ga. He specializes in sales and service to the textile industry in Goodyear's line of Chemigum, Pliolite, and Pliovic latices.

Mr. Brice

A new and modern repair and service branch of the **Mount Hope Machinery Co.** has been opened in Charlotte, N. C. Located at 208 West Griffith St., the new plant is fully equipped to service Mount Hope expanders and guiders and to perform factory repair service on all of the many types of Mount Hope machines for textile manufacturing plants in the southeastern states. Although not directly connected with the service functions of the branch, the Slaughter Machinery Co., southeastern representative of Mount Hope, occupies spacious quarters in the new building. Inquiries regarding the service and repair facilities of the new branch should be sent directly to the main office of Mount Hope in Taunton, Mass.

Perfecting Service Co. has purchased the **Precision Gear & Machine Co.** Perfecting Service will continue the operation of Precision Gear under its present name and location as a division and wholly owned subsidiary. All the present employees will remain with the company. Additions to the staff are: sales manager, C. B. Bookout; and plant manager, Everett Allen. The officers of Perfecting Service have replaced the former officers and directors.

Proctor & Schwartz, Inc., has increased its sales facilities at Spartanburg, S. C.; all equipment sales in the southern states will now be handled through the Spartanburg office, under the direction of Harold G. Black. Thomas A. Mahan has been assigned to the Spartanburg office, and John R. Schenck, who represented Proctor in the South for the past ten years, will now conduct his own business in addition to serving Proctor & Schwartz as a sales consultant.

National Starch Products, Inc., has four new vice-presidents: Dr. Carlyle G. Caldwell, John F. Fitzgerald, Dr. Robert W. Merritt, and S. R. "Woody" Thune. Mr. Fitzgerald is vice-president in charge of starch sales, having started with company in 1935 as a technical salesman to the textile trade.

Mr. Fitzgerald

H. James Coombe has been elevated from the position of president of **The Wm. Powell Co.** to chairman of the board of this industrial valve manufacturing firm. He will continue as active chief executive of the organization. Succeeding Mr. Coombe as president is David M. Forker, Jr., executive vice-president.

Richard A. Geuder has been appointed assistant general sales manager of the **Reliance Electric and Engineering Co.,** and Edward E. Helm, the company's sales vice-president, has been assigned the added duties of coordinator of all activities in merging the efforts of the recently acquired Reeves Pulley Co. Division with the other divisions of Reliance in Cleveland and Ashtabula, Ohio. To assist at Columbus, Ind., Frank B. Carr, from the Reliance home sales organization, has been transferred to the Reeves division as resident coordinator. In other new assignments in the sales organization, Reginald C.

GAS CAN SAVE YOUR MILL MONEY!

Gas can save your mill money in many ways. First of all, the fuel itself costs less. There is no coal or ash handling required and no flues or tubes to keep clean and free of soot.

Labor costs are materially reduced — one man can check burners periodically in the daytime and the watchman can check them at night. There is also less maintenance on equipment and fewer shut downs for repairs.

McBurney installs and services burners, including gas, oil, or combination gas-oil burners. Your present firing system can be retained in a stand-by capacity. Ask for details today.

CALL McBURNEY FOR THESE FINE EQUIPMENT LINES: Copes-Vulcan Boiler Controls, Copes Feedwater Regulators, Vulcan Soot Blowers, McBurney Underfeed Coal Stokers, Aqua Electric Scale Control, Gas & Oil Burning Equipment.

McBURNEY
STOKER & EQUIPMENT COMPANY
2110 Peachtree Rd., Atlanta, Ga.
PHONE
ELGIN 4436

QUALITY WORKMANSHIP
with PROMPT SERVICE

Two to three weeks delivery on
all repairs to Rollers, Flyers & Spindles

Repairing all types of Rolls and making new Steel Rolls
Overhauling Drawing a Specialty

Repair and make NEW Card Room Spindles

Make new any Fluted Roll • Lifter Rods
Gears • Trumpets

Satisfaction Guaranteed on all Work

Gastonia Roller,
Flyer & Spindle Co., Inc.

1212 East Industrial Ave. Gastonia, N. C.
Phone 5-1531

NEW, FREE Handbook

brings you up to date on the latest developments in mill-wide cleaning—tells you how to save time and money on scouring and kier-boiling operations; maintaining equipment, machinery, humidifiers, power plants; paint stripping and rust removal. Mail the coupon for your copy—today!

OAKITE PRODUCTS, INC.
26C Rector St., New York 6, N. Y.

Please send me your free "Textile Mill Cleaning Guide."

NAME_____

ADDRESS_____

COMPANY_____

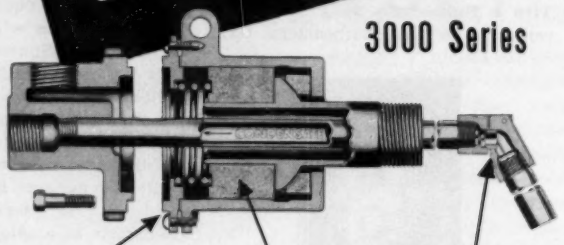
_____

SPECIALIZED INDUSTRIAL CLEANING
OAKITE
MATERIALS • METHODS • SERVICE

Technical Service Representatives in Principal Cities of U. S. and Canada

Johnson Joint with SYPHON ELBOW

3000 Series



ASSEMBLY PLATE — Holds internal parts in position when head is removed.

SELF-SUPPORTING — Needs no external supports of any kind.

SYPHON ELBOW — Permits use of straight pipe for syphon. Can be inserted or withdrawn right through the joint.

WRITE FOR FACTS

on this Series 3000 Johnson Joint and the syphon elbow. Remember Johnson Joints have written an unmatched service record . . . are first choice among mill men and machinery makers alike . . . and can fit all operating needs.

The Johnson Corporation
815 Wood St., Three Rivers, Mich.

KENTEX
TEXTILE APRONS

KENTEX long draft aprons are precision-built, to any specifications, on short notice. Write us, sending size, for free samples and prices. We are world's largest manufacturers of genuine leather textile aprons.

TEXTILE APRON COMPANY
East Point, Georgia
Hugh Williams & Company—Toronto, Canada

PRECISION BUILT

COTTON YARNS

Knitting and Warp
4's to 30's Single and Ply
Uniformity
Carded Combed

COMER-AVONDALE MILLS, INC.
Boston — Chattanooga — Chicago — Charlotte — New York
Philadelphia — Reading

representing

AVONDALE MILLS
Sylacauga, Alabama

COWIKEE MILLS
Eufaula, Alabama

Marchant, sales engineer, has been transferred to the sales office in Rockford, Ill.; Thomas J. Lisy, sales engineer, from Pittsburgh, Pa., to Chicago; and the following two men from the home sales office given new sales engineering assignments: Gerald A. Jakes in Toledo, Ohio, and Richard W. Palmer in Pittsburgh.

A new member of the textile finishes sales department of the **Procter & Gamble Co.** is Frank A. Hirsch. Mr. Hirsch is contacting mills in Alabama, Georgia, and Tennessee.

Mr. Hirsch

The Boston office of **J. O. Ross Engineering Corp.**, New York, N. Y., is now nearly 50 per cent larger in order to accommodate additional personnel recently added to the sales force, as well as to the drawing room force. The address is the same as in the past—79 Milk Street, Boston 9, Mass. A new salesman assisting Charlie Blanchard and Jack Lynch is Harry James.

Hoffman & Hoffman Co. has succeeded the Royster H. Johnson Company as sales representative in North and South Carolina for **Sarco Co., Inc.**

Sonoco Products Co. has made a number of changes in its sales organization. Dan Waterford has been transferred to the Los Angeles division as sales manager, Dick Peacock takes over the North Carolina territory, Walter Lewis has been transferred to the main office in Hartsville, S. C., and Robert Blackwell is new sales manager in the Hartsville area.

As a further step in its informational and promotional campaign for new and standard replacement parts which are available from its Repair Sales Division, **Saco-Lowell Shops** has published the first issue of "Saco-Lowell Repair Sales News," a tabloid size newspaper. Items of interest to supervisors of picker, card, spinning, twister, and slasher rooms are included. Plans are that the newspaper will appear at regular intervals and will be mailed free to those responsible for processing operations and equipment purchases. Any member of mill management desiring the paper should send his name, mill address, and mill position to Saco-Lowell with the request that he be placed on the mailing list.

SUPPLIERS News — WHAT THEY ARE DOING

W. R. Boyer has been elected treasurer of the **A. E. Staley Manufacturing Co.** Also elected to the board of directors, Mr. Boyer has been a Staley employee since 1934. L. S. Roehm, who is manager of the company's corn division, was elected a vice-president.

Seydel-Woolley & Co. is carrying out its sixth major expansion since returning to Atlanta, Ga., in 1923. Enlarged storage and manufacturing

For Nearly Half A Century

• • • • we have been printing Textile Industries and other W. R. C. Smith Publications in our growing plant which is today one of the South's largest, leading and most progressive printing organizations.

L. A. LEE Company, Inc.
DALTON, GEORGIA
Printers and Publishers

DURKEE-ATWOOD V-BELT QUIZ
for Maintenance ENGINEERS

DO YOU KNOW HOW TO PREVENT SLIPPING V-BELTS?

1. Check for overheating. 2. Check for excessive wearing of sheaves. 3. Check for excessive power loss in driven unit. 4. Check for loose belts in drive. (Sales plug: If none of the above solutions corrects the slipping, consult your local D-A distributor).

FREE COPY! *Handy Tips on V-belts and V-drives*
See your D-A distributor or write Dept. TI-7 for catalog that includes conversion tables, engineering data, latest Rubber Manufacturers Association horsepower ratings, drive selections and helpful Do's and Don'ts of V-belt operation.

DURKEE-ATWOOD CO.
MAin 0441 • Minneapolis 13, Minnesota

DURKEE ATWOOD V-BELTS

CLASSIFIED ADS

BUSINESS—EMPLOYMENT—EQUIPMENT— PROFESSIONAL CARDS—OPPORTUNITIES

CLASSIFIED RATES

Rates are net, payable in advance each month. Page is 3 columns, 10 inches deep—30 inches to page. Space measured by even inch vertically by 1, 2 or 3 columns in width. Column width 2¼ inches.
Transient rate for display classified, $16.00 per inch.
Contract rate for space within 12 months period as follows:
12 inches ----------$12.00 Per Inch.

POSITION WANTED: 20c per word per insertion; minimum charge $4.00 Cash with order. Box Number address care of TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga., count as eight words. Advertisements for help wanted, equipment for sale, for rent or wanted, and professional cards are accepted at display rates only.

RESEARCH OPPORTUNITY

for

TEXTILE CHEMIST or ENGINEER

New, attractive position has developed in our expanding textile research program for a young man with several years experience in the chemical finishing of textiles or textile manufacturing. Starting salary commensurate to the individual's capabilities. This position offers excellent advancement opportunities in a leading, progressive, industrial research organization. We invite you to submit a resume of your qualifications for prompt, confidential consideration to

The Personnel Manager

BATTELLE MEMORIAL INSTITUTE

505 King Avenue

Columbus 1, Ohio

CONFIDENTIAL EMPLOYMENT SERVICE

For textile mills, also for merchandising, styling and selling. We invite correspondence with executives seeking employment. If you are available for a good paying position, it will pay you to have your application in our files. We make no charge unless you accept employment through us. Negotiations are confidential.

CHARLES P. RAYMOND SERVICE, Inc.

Phone: LIberty 2-6547
294 Washington St., Boston 8, Mass.
Over 55 Years in Business

GUARANTEED USED BOBBINS

Twister Bobbins for 4" Ring Twisters
Twister Bobbins for 4½" Ring Twisters
Many styles 8" and 8-3/4" Quills
Send us samples of what you need.

CHARLES G. STOVER COMPANY
West Point, Ga.

POSITION WANTED

TEXTILE EXECUTIVE

GENERAL OPERATIONS MANAGER

Fully qualified to take complete charge of plant and office operations. Able to initiate, coordinate, supervise and direct all affairs pertaining to plant management, production, costs, sales, office procedures. Write Box 711, c/o TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 5, Ga.

OPPORTUNITY

For 2 or more cotton mill supervisors to lease or to buy a small coarse goods mill. Production can be contracted for all year round, if so desired. Write complete details of experience and financial reference. All replies will be kept in strict confidence. Reply to Box 707, TEXTILE INDUSTRIES, 806 Peachtree Street, N.E., Atlanta 5, Georgia.

DESIGNER

Designer with fabric experience capable of creating good floral designs required by large eastern national floor covering manufacturer. Write giving training, experience, age and salary requirements to Box 710, TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 5, Georgia.

TEXTILE BOBBIN WORKS, INC.

P. O. Box 545
Clinton, South Carolina

SPECIALIZING IN REPAIRS, ALTERATIONS, AND REFINISHING OF ALL TEXTILE BOBBINS. USED BOBBINS IN STOCK FOR SALE. LET US SERVE YOUR BOBBIN NEEDS.

SURPLUS DYESTUFFS WANTED

WE BUY COLORS AND CHEMICALS FOR CASH

Milroy Color & Chemical Co.
101 Maiden Lane, N. Y. 38, N. Y.

POSITION WANTED

Superintendent of dyeing and finishing available middle of July, 1955. Textile school graduate, forty-three years of age. Desires highly responsible position preferably in the knitting trade. Would like to settle in southeastern states, but willing to locate anywhere. Reply to Box 713, TEXTILE INDUSTRIES, 806 Peachtree Street, N. E., Atlanta 5, Georgia.

Nationally prominent multi-plant producer of chemical yarns and fibers requires a top-level Operations Director to plan and coordinate its textile operations to achieve high quality production, reduced costs and full utilization of equipment.

The man we seek is a creative engineering executive type, not over 45 years of age, a Textile or Mechanical Engineering graduate, who possesses a sound experience record in Textile mill operations and a good knowledge

textile operations director

of mill requirements in yarn and package performance. Candidates must have the ability and capacity to spark and direct development work in textile machinery; advise production staffs regarding most efficient and effective production schedules under varying conditions; establish production procedures, measures for product quality and specifications for all textile operations and products; prepare program of modification or expansion of textile facilities; develop improvement in processing of textile products for cost reduction and explore with other staff members the development, production and ultimate sale of new textile products which might be profitably produced with existing, modified or new equipment and machinery.

Write full particulars including age, education, experience and salary requirements.

Box 712

TEXTILE INDUSTRIES

806 Peachtree St., N.E., Atlanta 5, Ga.

facilities are being provided for the Finishing Chemicals Division. Plans are also being drawn for expansion of laboratory facilities to permit more research and development work. * * * E. F. (Eddie) Harrison, who recently

Mr. Harrison

joined the company as a sales-service representative, resides at 301 South Elam Ave., Greensboro, N. C., and handles Seydel-Woolley's business in that area. Mr. Harrison was formerly with Carolina Supply Co.

Atlanta's first downtown motor bank has been established by the **Trust Company of Georgia,** Atlanta, Ga. Drive-in banking and motor banking are features offered by this new facility.

Former executive manager of the United Kingdom branch of the **Universal Winding Co.,** J. Alan Nasmith, has been transferred to the company's office in Providence, R. I., as head of the export sales department. * * * Mills making stretch yarn on Universal Winding's continuous process stretch yarn producing equipment can now arrange to use the Heberlein Patent Corp. trademark, "Helanca." Universal points out that agreeements with Heberlein do not automatically give their licensees the right to use the Helanca trademark, but that it does clear the way for those licensees to arrange to do so. Such arrangements would naturally be made of their own volition, the company states, and would require a separate agreement between licensee and Heberlein.

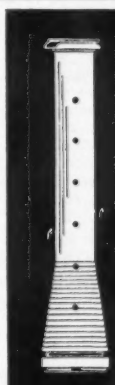
License to manufacture Griffin Size Applicators has been issued to the **West Point Foundry and Machine Co.,** West Point, Ga., according to information released by Ira L. Griffin, president of Ira L. Griffin and Sons, Charlotte, N. C. Explaining that Textile Shops, Spartanburg, S. C., have manufactured this size box previously and will continue production of it, Mr. Griffin said that West Point's production of the machine marks an expansion in his operation.

New officers elected by the **Textile Waste Exchange** are: Raymond K. Arnold, R. K. Arnold & Co., president; Harold Kirkpatrick, Kirkpatrick Co., 1st vice-president; Dexter Charak, Green Textile Associates, 2nd vice-president; John Bell, John M. Bell & Co., secretary-treasurer; and Morris I. McDonald, Dixie Textile Waste Co., assistant secretary-treasurer.

Troxler Electrical Testing and Development Laboratory has recently opened in Raleigh, N. C., for the professional testing, development, and evaluation of all types of electrical equipment. Officers of the company are William F. Troxler and Alvin W. Jenkins, Jr., with several members of the faculties of the schools of engineering at N. C. State College serving as consultants.

As a result of the move of the main office of **J. E. Rhoads & Sons** from Philadelphia, Pa., to Wilmington, Del., where the manufacturing plant is located, customers can expect quick deliveries, more complete stocks from the plant, and closer coordination of sales, engineering, research, and production for still better, more efficient service, this industrial leather supplier has announced. The new air conditioned office building is located at 2100 W. 11th St. in Wilmington.

SUPPLIERS News — WHAT THEY ARE DOING



LONG LOW COST LIFE!

★ Brass Bushings
★ True, Free-Running
★ Skilled Workmanship
★ Extra Durability

CONTACT YOUR REPRESENTATIVE

Vermont SPOOLS AND BOBBINS SINCE 1906

234 S. CHAMPLAIN ST.
BURLINGTON, VT.

MILTON STEEL BARREL WARP BEAMS

pictured is Milton Broadloom Beam for C & K Looms

for BROAD, NARROW FABRIC, RIBBON, VELVET & CARPET LOOMS

MILTON steel barrel Warp Beams are sturdily constructed with cast iron adjustable or fixed flanges. Ends equipped for all types of let-off.

WRITE FOR FREE BULLETINS

No. 54-S (Steel Beams) No. 49-A (Light Metal Beams)

MILTON MACHINE WORKS, INC.
MILTON • PENNA.

INDUSTRIAL ENGINEERS

SPECIALIZING IN TEXTILES FOR OVER ONE-THIRD OF A CENTURY

PAYROLL CONTROLS
WORK LOAD STUDIES
COST REDUCTION REPORTS
COST SYSTEMS SPECIAL REPORTS

RALPH E. LOPER CO.
GREENVILLE, S. C. FALL RIVER, MASS.

ADVERTISER'S INDEX

A

Abbott Machine Co. ..... *
Advertising Council, Inc. ..... *
Aldrich Machine Works 29
Allis-Chalmers Mfg. Co. 30, 31
Althouse Chemical Co. ..... *
Alvey Conveyor Mfg. Co. ..... *
American Air Filter Co. ..... *
American Aniline Products, Inc. ..... *
American Associated Consultants, Inc. ..183
American Cyanamid Co.
Textile Resins Division ..... *
American Lava Corp. ..... *
American Moistening Co. 7
American Monorail Co., Inc. 100
American Pulley Co. ..... *
American Red Cross ..... *
American Steel & Wire Co. ..... *
Arkansas Company, Inc. ..... *
Armstrong Cork Co. 38, 39
Ashworth Bros., Inc. 131, 132
Askania Regulator Co. ..... *
Atlanta Belting Co. ..... *
Atlantic Steel Co. 177

B

Bagshaw Co., Inc., W. H. 188
Bahnson Co. ..... *
Barber-Colman (Textile Div.) 172
Barber-Colman Co.
(Automatic Controls Division) ..... *
Becco Chemical Division 2
Bendix Aviation Corp.
(Eclipse Mach Div.) ..... *
Bijur Lubricating Co. ..... *
Binney & Smith, Inc. ..... *
Birch Brothers, Inc. 181
Blickman, Inc., S. ..... *
Booth Co., Benjamin ..... *
Branson Company 15
Briggs Shaffner Co. ..... *
Brush Electronics Co.,
Instrument Division ..... *
Buffalo Forge Co. 174
Buffalo Pumps, Inc. ..... *
Butterworth & Sons Co., H. W. 18

C

Carrier Corporation 166
Carter, Inc., A. B. ..... *
Celanese Corp. of America &
Subsidiary Cos. ..... *
Cen-Tennial Cotton Gin Co. ..... *
Central of Georgia Railway
Industrial Development Dept. ..... *
Chemstrand Corp. ..... *
Ciba Company, Inc. 33
Classified Ads 192
Clayton Co., J. M. 8
Cleveland Tramrail Division, The
Cleveland Crane & Engr. Co. 108
Clinton Foods, Inc. 36
Clipper Belt Lacer Co. 175
Cocker Mach. & Fdry. Co. 168
Cole Co., R. D. 169
Cole Engineering Corp. 148
Collins Bros. Mach. Co. ..... *
Columbia-Geneva Steel Division ..... *
Comer-Avondale Mills, Inc. 190
Comer Machinery Co. ..... *
Connor Lumber & Land Co. ..... *
Continental-Diamond Fibre Co. 42
Continental Gin Company 110
Cook-P&N Mach. Co., Inc. ..... *
Corn Products Sales Co. 49
Crompton & Knowles Loom Works 11
Curlator Corp. (Textile Div.) ..... *
Curtis & Marble Machine Co. ..... *
Cutler-Hammer, Inc. ..... *
Cyclone Fence Dept.
American Steel & Wire Div. ..... *

D

D & J Mfg. Co. ..... *
Darnell Corp., Ltd. ..... *
Dary Ring Traveler Co. 186
Dayton Rubber Mfg. Co. 26, 27
Diehl Mfg. Co. .....Second Cover
Dobeckmun Co. ..... *
Dodenhoff Company, Inc., W. D. ..... *
Dodge Mfg. Corp. ..... *
Dommerich & Co., L. F. ..... *
Dow Chemical Company 176
Draper Corporation 1
Dronsfield Bros. Ltd. ..... *
Du Pont de Nemours & Co., Inc., E. I.
(Dyestuff Div.) 161
Du Pont de Nemours & Co., Inc., E. I.
(Electrochemicals Dept.) ..... *
Du Pont de Nemours & Co., Inc., E. I.
(Finishes Div.) ..... *
Durkee Atwood Company 191

E

Economy Baler Co. ..... *
Emery Industries, Inc. ..... *
Engineered Plastics, Inc. 20
Exact Weight Scale Co. ..... *

F

Fafnir Bearing Co. ..... *
Fairbanks Company, The ..... *
Fairtex Corporation 15
Ferguson Gear Co. 165
Finnell System, Inc. ..... *
First National Bank of Atlanta 65
Fisher Mfg. Company ..... *
Fletcher Works ..... *
Foster Machine Co. 178
Foxboro Company 180
Franklin Process Co. 19

G

Gabb Special Products Division ..... *
Gair Co., Inc., Robert 112
Gaston County Dyeing Machine Co. .... *
Gastonia Roller, Flyer & Spindle Co. 150
Gastonia Textile Sheet Metal Works ...158
Gates Rubber Co. ..... *
Gaylord Container Corp. 47
General Dyestuff Corp. ..... *
General Dyestuff Corp. (Antara Div.) ..154
General Electric Co. 55, 135, 136, 137
General Radio Co. ..... *
General Tire & Rubber Co.
(Industrial Prod. Div.) 158
Georgia-Carolina Oil Co. 179
Goodyear Tire & Rubber Co., Inc.
(Chemical Prod.) 9
Graphite Metallizing Corp. ..... *
Griffin & Son, Ira L. ..... *
Gubelin International Corp. ..... *
Gulf Oil Corp. 43

H

Harshaw Chemical Co. ..... *
Hart Products Corp. 58
Hayes Industries, Inc. ..... *
Hayssen Mfg. Company 40
Hermas Machine Co. 186
Herr Mfg. Company 114
Hillyard Chemical Co. ..... *
Holyoke Machine Co. ..... *
Hotels Dinkler ..... *
Houghton & Co., Inc., E. F. ..... *
Howard Bros., Mfg. Co. ..... *
Hubinger Co. ..... *
Hunter Machine Co., James 62
Hyatt Bearing Division ..... *
Hyster Company 23

I

Ideal Industries, Inc. 64
Ideal Mach. Shops, Inc. ..... *
Industrial Rayon Corp. 16, 17
International Salt Co., Inc. ..... *

J

Jacobs Northern Div., E. H. ....Front Cover
Jenkins Metal Shops, Inc. ..... *
Jenkins' Sons, Inc., M. W. 6
Johnson Corp. 190

K

Kaumagraph Company ..... *
Keever Starch Company 138
Kidde & Co., Inc., Walter ..... *
Kidde Mfg. Co., Inc. 41

L

Lane & Bros., Inc., W. T. ..... *
Lanolized, Inc. ..... *
Laurel Soap Mfg. Co. 185

ADVERTISER'S INDEX

Lazenby & Co., F. A. 188
Lee Co., L. A. 191
Lincoln Engineering Co. ..... *
Link-Belt Co. ..... *
Livermore Corp., H. F. ..... *
Lockwood Greene Engineers ..... *
Logan Co. 46
Logemann Brothers Co. ..... *
Loper Co., Ralph E. 193
Louden Machinery Co. ..... *
Lucey Boiler Mfg. Co. ..... *

M

Maguire & Co., Inc., John P. ..... *
Manton-Gaulin Mfg. Co., Inc. ..... *
Marquette Metal Products Co. ..... *
Marshall & Williams Corp. ..... *
McBurney Stoker & Equip. Co. 189
McKiernan-Terry Corp. ..... *
Merrow Machine Co. 167
Metlon Corporation 52
Metro-Atlantic Chemical Co., Inc. ..... *
Micro Switch Division
Minneapolis-Honeywell Regulator Co. ..116
Miller Fluid Power Co. ..... *
Milton Machine Works 193
Monarch Elevator & Machine Co. ..... *
Monsanto Chemical Co. 45
Monticello Bobbin Co. ..... *
Morton Machine Works 24
Mount Hope Machy. Co. ..... *
Muller, Franz ..... *

N

National Aniline Division
Allied Chemical & Dye Corp. ..... *
National Business Publications, Inc. 170
National Ring Traveler Co. ..... *
National Starch Prod., Inc. 156
National Tube Co. ..... *
Naugatuck Chemicals Div. ..... *
New Departure Div. 104
New England Bobbin & Shuttle Co. .... *
New York & New Jersey Lubricant Co... *
Nopco Chemical Co. ..... *
North, Inc., Frank G. 28

O

Oakite Products, Inc. 190
Orr & Sembower, Inc. 44

P

Parks-Cramer Co. ..... *
Penick & Ford, Ltd., Co. 118
Perfecting Service Company ..... *
Perkins & Sons, Inc., B. F. ..... *
Pfister Chemical Works ..... *
Pick Mfg. Co. ..... *
Pioneer Heddle & Reed Co., Inc. ..... *
Pittsburgh Corning Corp. ..... *
Pneumafil Corporation ...141, 142, 143, 144
Powell Valves ..... *
Procter & Gamble Distributing Co. ..... *
Proctor & Schwartz, Inc. 126

R

RCA Engineering Products Div. 188
Red-Ray Mfg. Co. ..... *
Reiner, Inc., Robert 37
Reliance Elec. & Engineering Co. 21
Rhoads & Sons, J. E. ..... *
Richards-Wilcox Mfg. Co. ..... *
Ridge Tool Co. 14
Riggs & Lombard, Inc. ..... *
Roberts & Co., Associates, Inc. 196
Roberts Company 5
Rohm & Haas Co. 25
Ross Engr. Corp., J. O. ..... *
Roy & Son Co., B. S. ..... *
Royce Chemical Co. .....Fourth Cover

S

Saco-Lowell Shops 60, 128
Sandoz Chemical Works ..... *
Sargent's Sons Corp., C. G. ..... *
Scheer Co., Inc., Geo. ..... *
Schlafhorst & Co., W. ..... *
Scholler Bros., Inc. ..... *
Selig Company 173
Seydel-Wooley & Co. ..... *
Shell Oil Company ..... *
Shepard Niles Crane & Hoist Corp. 10
Simco Company ..... *
Sims Sheet Metal Works ..... *
Sinclair Refining Co., Inc. ..... *
Sirrine & Co., J. E. ..... *
Smith, Drum & Co. ..... *
Solvay Process Division, The Allied
Chemical & Dye Corp. ..... *
Sonoco Products Co. 32
Southeastern Engineering Co. 35
Southern Shuttles Div. ..... *
Southern States Equip. Corp. 12, 13
SpinSaVic, Inc. ..... *
Staley Mfg. Co., A. E. ..... *
Standard Brands, Inc. ..... *
Standard Chemical Prod., Inc. ..... *
Standard Oil Company, Inc. 134
Standard Pressed Steel Co. 188
Steel Heddle Mfg. Co. ..... *
Stein, Hall & Co., Inc. ..... *
Stowe-Woodward, Inc. 22
Strandberg Engineering Laboratories .... *
Swift & Company 150
Synthane Corp. ..... *

T

Talcott, Inc., James ..... *
Taylor-Styles & Co. ..... *
Tennant Co., G. H. 48
Tennessee Coal, Iron and Railroad Co. .. *
Tennessee Corp. ..... *
Terrell Co. ..... *
Texas Co. ..... *
Textile Apron Co. 190
Textile Industries 168
Textile Machine Works 66
Textile Paper Products, Inc. 4
Textile Shield Co., Inc. 187
Textile Shops ..... *
Thomaston Mills ..... *
Tillicum Rubber Co. ..... *
Toledo Scale Co. ..... *
Ton-Tex Corp. ..... *
Tool Service Engineering Co. ..... *
Treasury Department ..... *
Trico Fuse Co. ..... *
Truscon Laboratories ..... *
Trust Company of Georgia ..... *
Turbo Machine Co. ..... *
Twin Disc Clutch Co. ..... *

U

Union Special Machine Co. ..... *
U. S. Bobbin & Shuttle Co. ..... *
U. S. Ring Traveler Co. ..... *
U. S. Steel Corp. ..... *
U. S. Textile Mach. Co. ..... *
United Elastic Corporation ..... *
United States Rubber Co.
(International Division) ..... *
(Naugatuck Chemicals Div.) ..... *
Universal Winding Co. 182
Uster Corporation ..... *

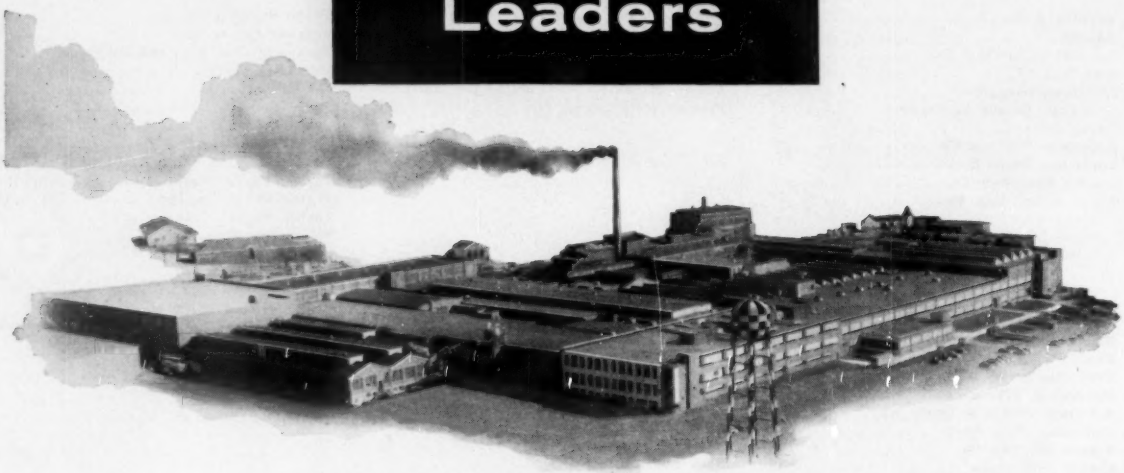
V

Van Vlaanderen Co. 184
Veeder Root, Inc. .....Third Cover
Vermont Spool & Bobbin Co. 193
Vickers, Inc. 54
Victor Ring Traveler Co. ..... *

W

Wallerstein Co., Inc. ..... *
Walton & Lonsbury Co. ..... *
Want Ads 192
West Point Fdy. & Mach. Co. 162
West Virginia Industrial & Publicity
Commission 56
Westinghouse Electric Corp.
(Sturtevant Division) ..... *
Whitin Machine Works 50
Whitinsville Spinning Ring Co. 175
Wica Chemicals, Inc. 106
Wicaco Machine Corp. ..... *
Wiesner-Rapp Co., Inc. 152
Wildman Mfg. Co. ..... *
Wonalancet Company ..... *

Serving America's Textile Leaders



The modern spinning mill at the Peerless Woolen Mills, Rossville, Georgia, a division of Burlington Industries, Inc., marks another important milestone in a long-range reorganization and expansion program started by the firm in 1936. This is Peerless' ninth major project completed to keep pace with the steadily-growing demand for its products and the need for modern and efficient methods and facilities.

Robert and Company Associates worked closely with Peerless in originally planning this program and have carried all of these expansion projects to completion.

For more than 40 years, we have been privileged to serve many of the great names in textiles and other fields, many on more than one project.

For Over 40 Years

ROBERT AND COMPANY ASSOCIATES
Textile Engineering Division
ATLANTA

Serving the Great Names in Textiles

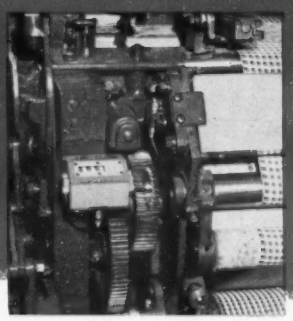
Alabama Mills, Inc.
American Bemberg Corp.
Cabin Crafts, Inc.
Chicopee Manufacturing Corp.
Cluett Peabody & Co., Inc.
Crompton Company
Crystal Springs Bleachery
Davenport Hosiery Mills
Dixie Mercerizing Co.
Fieldcrest Mills, Inc.
B. F. Goodrich Company
The Goodyear Tire and Rubber Company
Mt. Vernon-Woodberry Mills, Inc.
Muscogee Manufacturing Co.
Peerless Woolen Mills
(A Division of Burlington Industries, Inc.)
Pepperell Manufacturing Co.
Southern Bleachery and Printworks, Inc.
Standard-Coosa-Thatcher Co.
J. P. Stevens & Co.
Swift Manufacturing Co.
Swift Spinning Mills
The Springs Cotton Mills
Thomaston Mills
United Merchants and Manufacturers Co., Inc.
West Point Manufacturing Co.

THIS COMPLETE VEEDER-ROOT "Countrol Package"

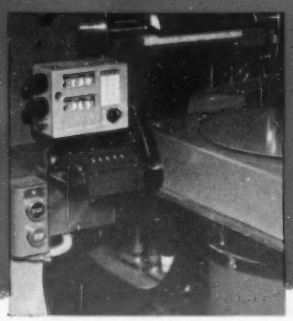
gives you AUTOMATIC UNIFORMITY all through your Mill . . . with New VEEDER-ROOT COUNTERS

. . . on Looms | **. . . on Frames**

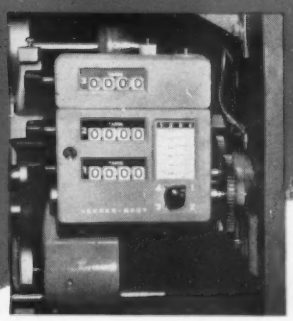
2-3-4 Pick Counter on Loom



Cut Meter on Loom



2-3-4 Hank Counter and Predetermining Counter on Drawing Frame



2-3-4 Yardage Counter and Predetermining Counter on Spinning Frame

On looms, 2-3-4 Pick Counters keep accurate production records and provide a basis for wage payment . . . while Cut Meters help maintain uniformity of cut-lengths of cloth, which is insisted upon today by the cutting-up trades.

On frames and other preparatory equipment, Hank, Yardage and Predetermining Counters hold can-variation to the minimum . . . and make it possible to run the largest economical packages.

This complete Veeder-Root "*Count*rol Package" adds up to better, automatic uniformity all through the mill. And that's why it pays *any* mill to get this Package of new and modern Veeder-Root Counters, when modernizing present machinery or buying new. Get in touch with the nearest Veeder-Root office *today*.

VEEDER-ROOT
INCORPORATED
"The Name that Counts"

HARTFORD 2, CONN. • GREENVILLE, S. C.

Chicago 6, Ill. • New York 19, N. Y.
Montreal 2, Canada • Dundee, Scotland
Offices and Agents in Principal Cities

VATROLITE®—Use this powerful concentrated reducing agent for brighter vat dyed colors on cotton, linen and rayon . . . for faster, cleaner stripping results on silk, cotton and rayon.
DISCOLITE® — A concentrated reducing agent, highly stable at high temperatures, outstanding for discharge and vat color printing. Employed successfully wherever the reducing agent must dry into the fabric and retain its reducing power.
PAROLITE® — A dust-free white crystalline reducing agent. Soluble, colorless, excellent for stripping wool, wool rags, shaddy acetate or Nylon fabric.
NEOZYME®—Concentrated low temperature desizing enzyme. Removes starch and gelatine. Excellent for eliminating thickeners from printed goods at low temperatures.
NEOZYME® HT—Concentrated high temperature desizing enzyme. Removes both starch and gelatine. Suitable for continuous pad-steam method. Remarkable stability at very high temperatures.
NEOZYME® L & NEOZYME Special — Liquid desizing enzymes in two degrees of concentration. Remarkable stability at very high temperatures.
VELVO SOFTENER #25 — Economical creamy white paste softener derived from highly sulphonated tallows. Gives softness and body without stiffness or affecting whites.
NEOPON®—Surface-active compound with excellent detergent qualities with some wetting power. Not affected by hard water. Can be used in acid, neutral or alkaline baths.
DISPERSALL®—Effective retardent for dyeing vat colors, dispersing and leveling qualities, for dyeing naphthol and vat colors, useful in wool and acetate dyeing. Valuable auxiliary in stripping vat colors, naphthols.
CASTROLITE®—A highly sulphonated castor oil used as a staple penetrant for dyeing or bleaching in leading textile mills.
NEOWET® — Permits effective wetting at all temperatures — particularly useful with enzymatic desizing agents. No reaction to soft or hard water. Not affected by either acid or alkali chemicals. Non-ionic.
VELVORAY® — A blend of vegetable oils and selected fats for a superior, non-foaming finishing oil. High in combined SO_3 and stability. Excellent for compressive shrinking, will not smoke off at high temperatures.
NEOQUEST® — Removes the unwanted metallic ions from your processing liquors. Kier boiling assistant; dyeing assistant; does good even in the finishing mix. Cleaner whites; brighter colors.
Royce
ROYCE CHEMICAL CO.
CHEMICAL COMPANY • CARLTON HILL, NEW JERSEY
Manufacturers of Chemicals for the Textile Industry